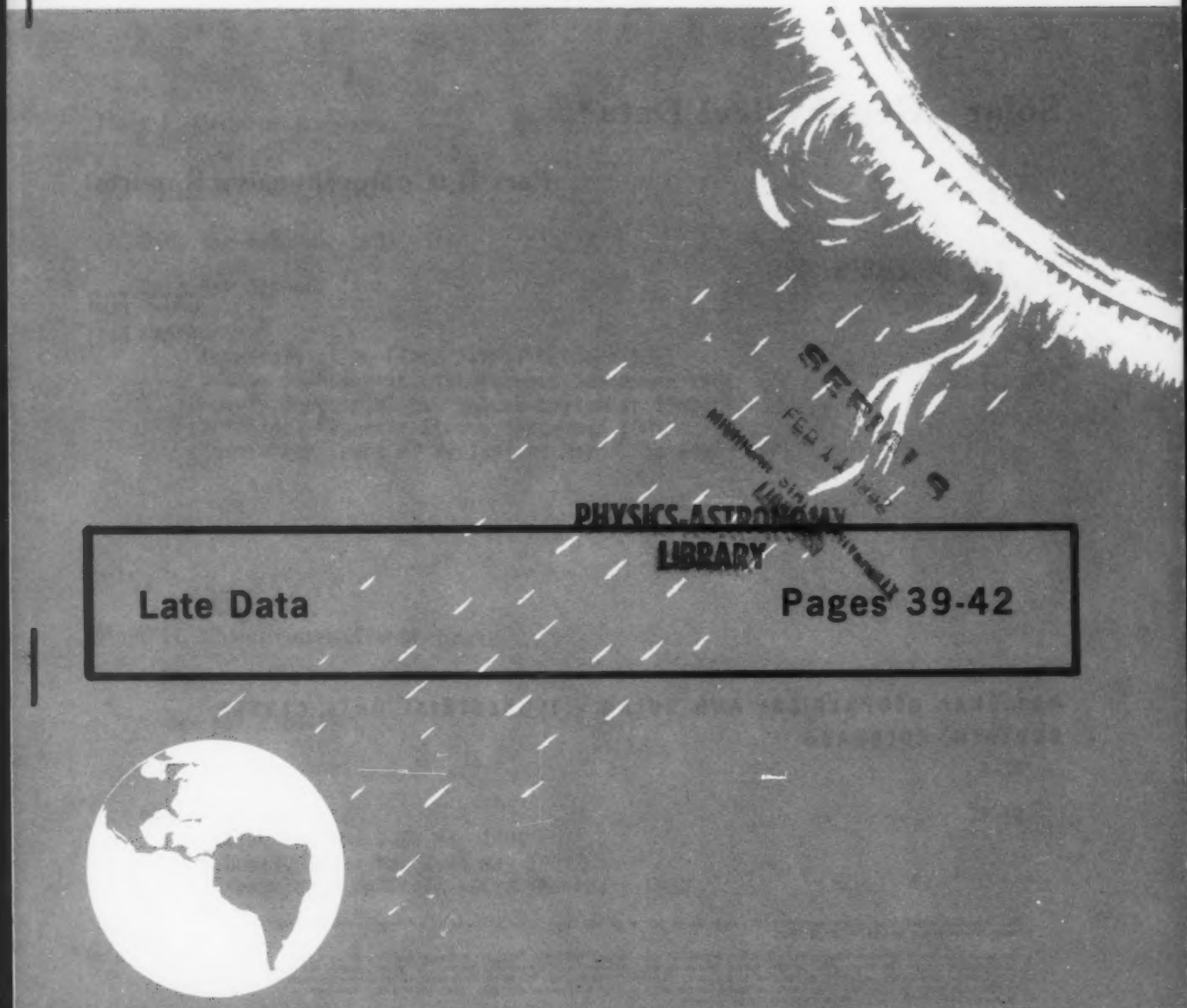
DECEMBER 1981 NUMBER 448 – Part II

Solar-Geophysical Data comprehensive reports

Data for June 1981, & Miscellanea

Explanation of Data Reports Issued as Number 438 (Supplement) February 1981



PHYSICS-ASTRONOMY LIBRARY

Late Data Pages 39-42

noaa NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION / ENVIRONMENTAL DATA AND INFORMATION SERVICE / BOULDER, COLORADO

U.S. DEPARTMENT OF COMMERCE
Malcolm Baldrige, Secretary
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
John V. Byrne, Administrator
ENVIRONMENTAL DATA AND INFORMATION SERVICE
Thomas D. Potter, Director

Solar - Geophysical Data

Part II (Comprehensive Reports)

NO. 448 DECEMBER 1981

DATA FOR
JUNE 1981

NATIONAL GEOPHYSICAL AND SOLAR - TERRESTRIAL DATA CENTER
BOULDER, COLORADO

For obtaining bulletins on a data exchange basis, send request to: World Data Center A for Solar-Terrestrial Physics, NOAA/EDIS/NGSDC, D631, 325 Broadway, Boulder, Colorado 80303.

For sale through the National Geophysical and Solar-Terrestrial Data Center, NOAA/EDIS, D631, 325 Broadway, Boulder, Colorado 80303. Subscription Price: $64.00 annually for both part I (Prompt Reports) and part II (Comprehensive Reports) or $32.00 annually for either part. Annual supplement containing explanation is included. For foreign mailing add $42.00 for both parts or $21.00 for either part. Single issue price is $3.00 for either part and $2.50 for the extra issue. Make checks and money orders payable to: Department of Commerce, NOAA/NGSDC. Note: $4.00 handling charge per order.

To standardize referencing these reports in the open literature, the following format is recommended:
Solar-Geophysical Data, 450 Part I (or Part II), pages, February 1982, U.S. Department of Commerce (Boulder, Colorado, U.S.A. 80303).

SOLAR-GEOPHYSICAL DATA

No. 448

Issued in two parts

Helen E. Coffey, Editor

Joe H. Allen, Chief
Solar-Terrestrial Physics Division

CONTENTS

Part I (Prompt Reports) PAGE

Index for 1980-1981 2

Data for November 1981 3-45

Data for October 1981 47-156

Late Data 157-168
Intervals of No Flare Patrol October 1981
Sudden Ionospheric Disturbances September 1981
Hourly Equatorial Dst Values September 1981
Principal Magnetic Storms September 1981
Cosmic Ray Chart of Variations May - September 1981

Part II (Comprehensive Reports)

Index for 1980-1981 2

Data for June 1981 3-37

Miscellaneous Data 39-42
Active Regions 1-29 May 1981
Synoptic Solar Map 1-29 May 1981
Intervals of No Flare Patrol February 1980

DETAILED COVERAGE FOR 1980-81 PUBLISHED IN "SOLAR-GEOPHYSICAL DATA"

		1980 Nov	Dec	1981 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct		
A.	SOLAR AND INTERPLANETARY PHENOMENA														
A.1	Sunspot Drawings	437A 60	438A 44	439A 46	440A 52	441A 58	442A 52	443A 44	444A 52	445A 54	446A 40	447A 54	448A 52		
A.2a	Zurich Provisional Relative Sunspot Numbers Rz	436A 11	437A 11	---	---	---	---	---	---	---	---	---	---	---	
A.2aa	International Provisional Relative Sunspot Numbers R_I			438A 11	439A 9	440A 11	441A 13	442A 11	443A 9	444A 11	445A 11	446A 11	447A 11	448A 11	
A.2b	Zurich Final Sunspot Numbers Rz	440A 10	440A 10	---	---	---	---	---	---	---	---	---	---	---	
A.2c	American Relative Sunspot Numbers Ra	436A 11	437A 11	438A 11	439A 9	440A 11	441A 13	442A 11	443A 9	444A 11	445A 11	446A 11	447A 11	448A 11	
A.3a	Mt. Wilson Magnetograms	437A 60	438A 44	439A 46	440A 52	441A 58	442A 52	443A 44	444A 52	445A 54	446A 40	447A 54	448A 52		
A.3b	Mt. Wilson Magnetic Characteristics of Sunspots	437A120	438A106	439A108	440A108	441A120	442A112	443A106	444A112	445A116	447A163	447A114	448A114		
A.3c	Kitt Peak Magnetograms	437A 60	438A 44	439A 46	440A 52	441A 58	442A 52	443A 44	444A 52	445A 54	446A 40	447A 54	448A 52		
A.3d	Mean Solar Magnetic Field (Stanford)	436A 42	437A 48	438A 36	439A 38	440A 46	441A 50	442A 44	443A 38	444A 46	445A 47	446A 34	447A 46	448A 44	
A.3e	Stanford Magnetograms	437A 60	438A 44	439A 46	439A 52	441A 58	442A 52	443A 44	444A 52	445A 54	446A 40	447A 54	448A 52		
A.4	H-alpha Filtergrams	437A 60	438A 44	439A 46	440A 52	441A 58	442A 52	443A 44	444A 52	445A 54	446A 40	447A 54	448A 52		
A.5	Calcium Plage Drawings - Mt. Wilson or Big Bear	437A 60	438A 44	439A 46	440A 52	441A 58	442A 52	443A 44	444A 52	445A 54	446A 40	447A 54	448A 52		
A.5a	Calcium Plage (Mt. Wilson) and Sunspot Regions	437A120	438A106	439A108	440A108	441A120	442A112	443A106	444A112	445A116	447A163	447A114	448A114		
A.5b	Mt. Wilson Daily Calcium Plage Indices	437A134	438A121	439A123	440A121	441A135	442A127	443A119	444A122	445A129	447A175	447A128			
A.6	H-alpha Synoptic Charts	437A 52	438A 40	439A 42	440A 48	441A 54	442A 48	443A 42	444A 50	445A 52	446A 38	447A 50	448A 48		
A.6b	Synoptic Chart and Active Regions (Paris)	444B 52	444B 54	444B 56	444B 58	446B 79	447B 76	448B 40							
A.6c	Stanford Solar Magnetic Field Synoptic Charts	437A 54	438A 41	439A 43	440A 49	441A 55	442A 49	443A 43	444A 51	445A 53	446A 39	447A 51	448A 50		
A.6d	Kitt Peak Solar Magnetic Field Synoptic Charts	437A 56	438A 42	439A 44	440A 50	441A 56	442A 50								
A.6e	Mass Ejections from the Sun	441B 51	443B 62	443B 76	444B 48	445B 57	446B 74	447B 40	448B 38						
A.7f	Helium D3 Chromosphere (Big Bear)	436A 39	437A 44	438A 33	439A 39	441A170	---	---	443A 35	444A 43	---	446A 30	---	448A 40	
A.7g	Helium Synoptic Maps (KPNO)	437A 58	438A 43	439A 45	440A 51	441A 57									
A.7h	Coronal Line Emission (Sac Peak)	437A 60	438A 44	439A 46	440A 52	441A 58	442A 52	443A 44	444A 52	445A 54	446A 40	447A 54	448A 52		
A.8aa	2800 MHz - Daily Values of Solar Flux (ARO-Ottawa)	436A 11	437A 11	438A 11	439A 9	440A 11	441A 13	442A 11	443A 9	444A 11	445A 11	446A 11	447A 11	448A 11	
A.8ac	2800 MHz - Daily Values of Adj. Solar Flux (ARO-Ottawa)	436A 11	437A 11	438A 11	439A 9	440A 11	441A 13	442A 11	443A 9	444A 11	445A 11	446A 11	447A 11	448A 11	
A.8g	Daily Values of Adjusted Solar Flux (AFGL)	436A 11	437A 11	438A 11	439A 9	440A 11	441A 13	442A 11	443A 9	444A 11	445A 11	---	447A 11	448A 11	
A.10a	169 MHz - Interferometric Observations (Nancay)	438A160	438A161	439A154	439A 24	440A 29	442A160	442A 27	443A 23	444A 27	445A 27	446A 20	447A 28	448A 25	
A.10c	21 cm East-West Solar Scans (Fleurs)	436A 29	437A 34	438A 24	439A 27	440A 32	441A 33	442A 30	443A 26	444A 30	445A 30	446A 23	447A 32	448A 28	
A.10d	43 cm East-West Solar Scans (Fleurs)	436A 30	437A 35	438A 25	439A 28	440A 33	441A 34	442A 31	443A 27	444A 31	445A 31	446A 24	447A 33	448A 29	
A.10e	10.7 cm East-West Solar Scans (Ottawa-ARO)	436A 28	437A 33	438A 23	439A 26	440A 31	441A 32	442A 29	443A 25	444A 29	445A 29	446A 22	447A 31	448A 27	
A.10f	3 cm East-West Solar Scans (Toyokawa)	436A 27	437A 32	438A 22	439A 25	440A 30	441A 31	442A 28	443A 24	444A 28	445A 30	---	447A 29	448A 26	
A.10g	8 cm East-West Solar Scans (Toyokawa)											446A 21	447A 30	---	
A.11g	Solar X-ray (SMS/GOES) (graphs)	441B 46	442B 36	443B 20	444B 43	445B 51	446B 69	447B 34	448B 31						
A.12e	Energetic Solar Particles (IMP H & J)														
A.13d	Solar Wind from IPS Measurements	436A 37	437A 41	442A161	442A161	442A161	442A161	442A 39	443A 32	445A170	445A 42	447A160	447A 41	448A 38	
A.13e	Solar Plasma (IMP H & J)	443B 67													
A.13f	Solar Wind (Pioneer 12 (Venus))	436A 43	437A 45	438A 37	442A170	442A170	442A171	442A 45	443A 39	444A 47	445A 45	446A 31	447A 43	448A 41	
A.17	Interplanetary Magnetic Field (Pioneer 12)	438A162	438A125	439A127	440A153	---	---	---	444A126	445A135	446A107	447A129			
A.17c	Inferred IP Magnetic Field	436A 40	437A 46	438A 34	439A 36	440A 44	441A 48	442A 42	443A 36	444A 44	445A 46	446A 32	447A 44	448A 42	
B.	IONOSPHERIC (AND RADIO WAVE PROPAGATION) PHENOMENA														
B.52	Graphs of Transmission Frequency Range	437A170	438A156	439A150	440A154	441A167	442A156	443A150	444A148	445A166	446A140	447A156	448A154		
B.53	Quality Figures Based on Frequency Ranges	437A169	438A155	439A152	440A156	443A166	442A158	443A149	444A150	445A165	446A139	447A158	448A156		
C.	FLARE-ASSOCIATED EVENTS														
C.1a	Optical Observations Flares	436A 16	437A 16	438A 16	439A 14	440A 18	441A 18	442A 16	443A 15	444A 16	445A 16	446A 16	447A 16	448A 16	
C.1ba	Optical Observations Flares (Standardized Data)	442B 44	443B 28	445B 60	447B 44										
C.1d	Flare Patrol Observations	436A 26	437A 31	438A 21	439A 23	440A 28	441A 30	442A 26	443A 22	444A 26	445A 26	446A 19	448A158		
C.1d	Flare Patrol Observations	442B 82	443B 59	445B 90	446B 42										
C.1e	Flare Indices (by day)	442B 81	443B 58	445B 89	447B 73										
C.1f	Flare Indices (by Region)	443B 63	445B 92												
C.3	Solar Radio Waves - Outstanding Occurrences	441B 5	442B 5	443B 5	444B 5	445B 5	446B 5	447B 4	448B 4						
	Solar Radio Waves - Fixed Frequencies - Selected	436A 31	437A 36	438A 26	439A 29	440A 34	441A 35	442A 32	443A 28	444A 32	445A 32	446A 25	447A 34	448A 30	
C.4a	Solar Radio Spectral Obs. (Fort Davis)	437A139	439A155	439A128	440A126	441A136	442A134	443A123	444A127	445A136	446A108	447A130	448A134		
C.4d	Solar Radio Spectral Obs. (Culgoora)	437A139	438A126	439A128	440A126	441A136	443A154	443A123	444A127	445A136	446A108	447A130			
C.4e	Solar Radio Spectral Obs. (Weissenau)	438A126	439A128	440A126	441A136	442A134	443A123	445A174	445A136	445A136	446A108	447A130	448A134		
C.4f	Solar Radio Spectral Obs. (Sagamore Hill)	437A139	438A126	439A128	440A126	441A136	442A134	443A123	444A127	445A136	446A108	447A130	448A134		
C.4h	Solar Radio Spectral Obs. (Owingeloo)	437A139	438A126	439A128	440A126	441A136	442A134	443A123	444A127	445A136					
C.4i	Solar Radio Spectral Obs. (Bleien)	437A139	438A126	439A128	440A126	441A136	442A134	443A123							
C.4j	Solar Radio Spectral Obs. (Manila)														
C.4k	Solar Radio Spectral Obs. (Learmonth)	437A139	438A126	439A128	440A126	441A136	442A134	443A123	444A127	445A136	446A108	447A130	448A134		
C.4l	Solar Radio Spectral Obs. (Palehua)	437A139	438A126	439A128	440A126	441A136	442A134	443A123	444A117	445A136	446A108	447A130	448A134		
C.5e	Solar X-ray (SMS/GOES) (graphs)	441B 46	442B 36	443B 20	444B 43	445B 51	446B 69	447B 34	448B 31						
C.6	Sudden Ionospheric Disturbances	437A135	438A122	439A124	440A122	442A172	442A128	443A120	444A123	445A130	446A102	448159			
D.	GEOMAGNETIC AND MAGNETOSPHERIC PHENOMENA														
D.1a	Geomagnetic Indices Kp, Km, Ks, Km, Ap, aa, Cp	437A163	438A149	439A145	440A149	441A162	443A164	443A144	444A144	445A160	446A135	447A152	448A150		
D.1ba	27-day Chart of Kp Indices	437A165	438A151	439A147	440A151	441A164	442A153	443A146	444A146	445A162	446A137	447A154	448A152		
D.1c	27-day Chart of C9	4411165	441A165												
D.1ca	aa graph 1868 - present	437A168	438A154	439A148	440A152	441A166	442A155	443A147	444A147	445A163	447A180	448A164			
D.1d	Principal Magnetic Storms														
D.1e	Reduced Magnetograms														
D.1f	Sudden Commencement and Solar Flare Effects	437A169	439A163	439A149	441A170	442A180	443A165	443A148	445A180	445A164	446A138	447A155	448A153		
D.1g	Equatorial Indices Dst	437A167	438A153	440A160	441A172	442A182	444A155	445A182	445A183	446A144	447A179	448A163			
D.1h	Geomagnetic Substorm Log (Boulder)	436A 44	437A 49	438A 38	439A 40	440A 43	441A 51	442A 46	443A 40	444A 48	445A 4	446A 35	447A 47	448A 45	
F.	COSMIC RAYS														
F.1a	Cosmic Ray Neutron Counts (Deep River)	438A163	439A162	440A159	440A145	442A177	442A151	444A152	447A176	447A176	447A177	447A151	448A149		
F.1b	Cosmic Ray Neutron Counts (Climax)	438A163	438A163		440A159	442A177	442A151	443A141	445A178	447A176	447A177	447A151			
F.1e	Cosmic Ray Neutron Counts (Alert)	438A163	439A162	440A159	440A145	442A177	442A151	444A152	447A176	447A176	447A177	447A151	448A149		
F.1h	Cosmic Ray Neutron Counts (Thule)	437A162	438A148	439A144	440A145	441A159	442A151	443A141	444A141	445A157	446A134	447A151	448A149		
F.1i	Cosmic Ray Neutron Counts (Kiel)	437A162	438A148	439A144	440A145	441A159	442A151	443A141	444A141	445A157	447A177	447A151	448A149		
F.1j	Cosmic Ray Neutron Counts (Tokyo)	437A162	438A148	439A144	440A145	441A159	442A151	443A141	444A141	445A157	447A177	447A151	448A149		
F.1l	Cosmic Ray Neutron Counts (Huancayo)	439A162	439A162	442A177	442A177	442A177	443A163	443A141	445A178	447A176	447A177	447A151			
H.	MISCELLANEOUS														
H.60	IUWDS Alert Decisions	436A 5	437A 5	438A 5	439A 4	440A 5	441A 5	442A 5	443A 5	444A 5	445A 5	446A 4	447A 4	448A 4	

Notes:

"437A 60" listed under 1980 Nov means that the sunspot drawings for Nov 1980 were contained in *Solar-Geophysical Data* Number 437 - Part I, beginning on page 60.

A = Part I, B = Part II.

----- = no data available.
blank = data not yet received.

JUNE 1981 DATA

Contents

Page

Active Regions (Data not available at time of publication.)

Synoptic Solar Maps (Data not available at time of publication.)

Solar Flares (Data not available at time of publication.)
H-alpha Solar Flares (Standardized Data)
Daily Flare Indices
Intervals of No Flare Patrol Observation

Solar Radio Emission 4-30
Outstanding Occurrences (Fixed Frequencies)

Energetic Solar Particles and Plasma (Data not available at time of publication.)

Solar X-ray Radiation
SMS-GOES 31-35

Mass Ejections from the Sun 36-37

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
				UT	UT	MINUTES	PEAK	MEAN		
01	245	LEAR	43 NS	0244.5	0511.8	147.5	27			
	15400	LEAR	8 S	0000.8	0000.8	.2	29			
	3750	TYKW	20 GRF	0733.0	0744	55.0	6.0	2.5		
	2000	TYKW	20 GRF	0733.0	0744	60.0	4.0	2.0		
	1000	TYKW	20 GRF	0733.0	0745	60.0	1.5	.7		
	9400	TYKW	20 GRF	0734.0	0744	45.0	7.0	3.0		
	5730	CRIM	25 R	0734.0	0741.0		6.0			L
	430	KRAK	8 S	0811.6	0811.6	.2	13.0			
	930	BORD	41 F	0852.8	0853.1	.7	84.0	3.0		
	3100	CRIM	20 GRF	0920.0	0922.0	9.0	3.0	1.0		
	536	ØNDR	8 S	0957.7	0957.7	.2	169.0			
	930	BORD	41 F	1006.1	1006.2	.4	23.0	2.0		
	2800	OTTA	8 S	1251.5	1252	.3	3.4	1.7		
02	245	PALE	8 S	0113.1	0113.6	1.0	53			
	3100	CRIM	26 FAL	0840.0	0945.0		10.0			
	930	BORD	41 F	1428.7	1429.5	.8	26.0	2.0		
	8800	PALE	8 S	1803.8	1805.3	1.8	110			
	8800	PALE	47 GB	1935.6	1936.1	2.5	2200			
	2695	PENT	20 GRF	2305.0	2317	30.0	2.4	1.2		
03	2000	TYKW	32 ABS	0055.0	0140	48.0	-1.5	-.7		
	3750	TYKW	32 ABS	0055.0	0130	95.0	-1.5	-.7		
	1000	TYKW	45 C	0142.0	0145.6	5.0	1.5	.5		
	3750	TYKW	5 S	0142.0	0150	25.0	3.0	1.5		
	9400	TYKW	5 S	0142.0	0150	25.0	2.0	1.0		
	2000	TYKW	45 C	0143.0	0143.2	4.0	3.5	1.0		
	15400	PALE	8 S	0154.6	0155.6	2.0	28			
	3100	CRIM	26 FAL	0920.0	1200.0		4.0			
	810	KRAK	8 S	1108.4	1108.4	.2	9.0			
	430	KRAK	40 F	1115.6	1117.1	2.0	33.0			
	2800	OTTA	27 RF	1924.0		121.0	2.2	1.9		
	2800	OTTA	24 R	1924.0	1927	3.0	2.2	1.1		
	2800	OTTA	24P R	1927.0		90.0	2.2			
	2800	OTTA	26 FAL	2057.0	2125	28.0	-2.2	-1.1		
	2695	PENT	20 GRF	2245.0	2310	95.0	2.6	1.7		
	9400	TYKW	20 GRF	2303.0	2320	50.0	3.0	1.5		
	3750	TYKW	20 GRF	2303.0	2310	50.0	2.0	1.0		
04	430	KRAK	42 SER	0737.3	0738.0	6.1	31.0			
	430	KRAK		0737.3	0742.8		18.0			
	930	BORD	41 F	0802.2	0802.6	.7	30.0	2.0		
	410	LEAR	8 S	0841.3	0841.3	.5	36			
	245	LEAR	8 S	0854.0	0854.1	.3	28			
	2800	OTTA	2 S/F	1748.2	1751.7	3.8	6.0	2.8		
	2800	OTTA	20 GRF	1855.0	1940	115.0	10.8	6.6		
	606	PALE	8 S	1901.1	1901.6	.7	40			
05	5730	IRKU		0441.0	0444.8		41.0			R
	5730	IRKU	21 GRF	0441.0	0444.1	9.0	35.0			R
	127	TORN	47 GB	0537.0U		3.0	7700.0D			SATURATED
	930	BORD	41 F	0657.8	0658.3	.7	32.0	20.0		
	2800	OTTA	20 GRF	1460.0	1515	120.0	2.0	1.0		
06	3750	TYKW	5 S	0225.0	0230	15.0	1.5	.7		
	536	ØNDR	8 S	1253.9	1253.9	.2	94.0			
	260	ØNDR	8 S	1254.0	1254	.3	172.0			
	2800	OTTA	21 GRF	1930.0	2200	210.0	2.8	1.4		
	2695	PENT	21 GRF	2004.0	2007	20.0	3.4	1.7		
	2800	OTTA	1 S	2005.0	2005.5	2.0	9.2	4.4		
07	2840	PEKG	21 GRF	0117.0	0258.7	167.0	8.3	5.0		
	9395	PEKG	20 GRF	0124.0	0206	11.3	8.0	6.1		
	606	LEAR	8 S	0211.8	0211.8	.2	13			
	410	LEAR	8 S	0211.8	0211.8	.2	17			
	3750	TYKW	45 C	0258.0	0259.5	2.0	6.0	3.0		
	2000	TYKW	5 S	0259.5	0301	20.0	2.0	.7		
	3750	TYKW	29 PBI	0300.0		30.0	2.0	1.0		
	2000	TYKW	20 GRF	0630.0	0710	90.0	2.0	1.0		
	3750	TYKW	20 GRF	0630.0	0708	80.0	3.0	1.5		
	2840	PEKG	20 GRF	0716.0	0731.4	56.0	4.0	2.0		
	9395	PEKG	20 GRF	0725.0	0742	35.0	6.0	4.0		
	260	ØNDR	8 S	1145.5	1145.5	.2	47.0			
	536	ØNDR	8 S	1145.8	1145.8	.2	39.0			
	2800	OTTA	8 S	2152.0	2152	.1	2.8			
08	2000	TYKW	5 S	0239.3	0239.9	.1	2.5	.7		
	2000	TYKW	5 S	0239.3	0239.9	1.0	.7	.7		
	3750	TYKW	5 S	0239.5	0239.6	1.0	1.5	.5		
	1000	TYKW	5 S	0246.4	0246.5	1.5	8.0	1.5		
	3750	TYKW	21 GRF	0304.0	0400	210.0	3.0	2.0		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
08	3750	TYKW	5 S	0305.0	0306.3	3.0	5.0	1.5		
	2000	TYKW	21 GRF	0309.0	0400	200.0	2.0	1.0		
	3750	TYKW	20 GRF	0520.0	0550	70.0	2.0	1.0		
	2840	PEKG	20 GRF	0735.0	0754	32.0	6.0	3.0		
	3750	TYKW	21 GRF	0737.0	0757	80.0	3.0	1.5		
	2000	TYKW	21 GRF	0737.0	0754	80.0	3.0	1.5		
	9400	TYKW	21 GRF	0740.0	0757	60.0	4.0	2.0		
	9395	PEKG	20 GRF	0746.0	0753	20.0	8.0	3.0		
	5200	BERN	4 S/F	0748.1	0751.3	45.0	111.0			
	3200	BERN	4 S/F	0748.1	0751.3	45.0	24.0			
	2840	PEKG	45 C	0749.0	0750.5	3.4	17.0	5.3		
	9395	PEKG	5 S	0749.8	0750.3	2.7	74.0	14.0		
	2650	DWIN	2 S/F	0750.0	0751	2.0	10.0	5.0		
	8400	BERN	4 S/F	0750.6	0751.3	15.0	178.0			
	2695	LEAR	4 S/F	0750.1	0751.3	2.2	15			
	4995	ATHN	4 S/F	0750.3	0751.1	3.0	61			
	9100	GORK	3 S	0750.5	0751.5	1.5	95.0			
	11800	BERN	4 S/F	0750.5	0751.3	15.0	20.0			
	3750	TYKW	45 C	0750.5	0751.4	4.0	24.0	5.0		
	9400	TYKW	5 S	0750.5	0751.4	4.0	85.0	10.0		
	8800	LEAR	8 S	0750.6	0751.3	1.7	98			
	4995	LEAR	4 S/F	0750.6	0751.3	2.4	75			
	2950	GORK	1 S	0751.0	0751.2	1.7	8.0	4.0		
	2000	TYKW	45 C	0751.0	0751.4	1.5	3.0	1.0		
	9100	GORK	29 PBI	0752.0	0752.0	36.0	11.0			
	2840	PEKG	22 GRF	0807.0	0809.8	38.0	7.1	2.4		
	3750	TYKW	45 C	0809.0	0811.7	15.0	11.0	3.0		
	2950	GORK	1 S	0809.8	0810.8	7.0	3.0	1.5		
	9395	PEKG	1 S	0810.0	0811	3.0	3.1	2.3		
	2950	GORK	1 S	0924.9	0925.5	4.0	3.0	1.5		
	2800	OTTA	20 GRF	1440.0	1555	175.0	5.2	1.8		
	2800	OTTA	20 GRF	1750.0	1800	100.0	2.6	1.3		
	2800	OTTA	20 GRF	1945.0	2020	70.0	2.2	1.1		
	2800	OTTA	20 GRF	2140.0		40.0	2.4	1.8		
	3750	TYKW	20 GRF	2145.0	2203	50.0	3.0	1.0		
09	3750	TYKW	45 C	0209.0	0211.1	5.0	9.0	3.0		
	2000	TYKW	45 C	0209.0	0211.1	4.0	2.0	.5		
	1000	TYKW	45 C	0211.0	0212.2	1.5	32.0	1.0		
	3750	TYKW	29 PBI	0214.0		35.0	1.5	.7		
	2840	PEKG	20 GRF	0317.6	0409	96.0	7.1			
	3750	TYKW	20 GRF	0320.0	0340	80.0	1.5	.7		
	2000	TYKW	21 GRF	0328.0	0335	50.0	1.5	.5		
	9395	PEKG	20 GRF	0405.0	0438	65.0	12.0	9.4		
	6100	KISV	8 S	0504.2	0504.3	.3	4.0			
	2840	PEKG	1 S	0515.0	0515.9	2.0	18.4	5.0		
	2840	PEKG	20 GRF	0515.0	0521		7.4	5.0		
	2000	TYKW	5 S	0515.0	0516.0	2.0	4.0	2.0		
	3750	TYKW	5 S	0515.0	0515.8	20.0	3.0	1.5		
	2950	GORK	1 S	0515.5	0515.8	.7	4.0	2.0		
	2000	TYKW	29 PBI	0517.0		18.0	2.0	1.0		
	2840	PEKG	20 GRF	0559.0	0821	210.0D	13.0	9.0		
	9395	PEKG	20 GRF	0730.0	0819	120.0D	15.0			
	260	ØNDR	8 S	0830.0	0830	.2	29.0			
	536	ØNDR	8 S	0851.8	0851.8	.2	45.0			
	810	KRAK	41 F	0852.2	0854.2	2.4	8.0			
	930	BORD	8 S	0853.6	0853.6	.1	19.0	1.0		
	650	GORK	4 S/F	0910.4	0911.7	2.1	26.0	13.0		
	2800	OTTA	240AR	1430.0	1443	13.0	3.6			
	2650	DWIN	2 S/F	1433.0	1434	4.0	40.0	20.0		
	8400	BERN	4 S/F	1433.3	1434.3	30.0	183.0			
	3200	BERN	4 S/F	1433.3	1434.3	30.0	82.0			
	11800	BERN	4 S/F	1433.3	1434.3	25.0	59.0			
	5200	BERN	4 S/F	1433.3	1434.3	30.0	286.0			
	2800	OTTA	3 S	1433.5	1434.2	2.0	47.0	23.5		
	7000	SAOP	45 C	1433.5	1434.4	1.4	200.0	100.0		24L
	4995	SGMR	4 S/F	1433.5	1434.3	4.5D	160			
	4995	ATHN	4 S/F	1433.6	1434.5	7.0	220			
	2695	SGMR	4 S/F	1433.6	1434.3	3.5D	41			
	2695	ATHN	4 S/F	1433.6	1434.5	9.2D	42			
	15400	SGMR	8 S	1433.6	1434.1	1.4	31			
	8800	SGMR	4 S/F	1433.6	1434.3	3.7	93			
	1415	SGMR	8 S	1433.8	1434.1	2.0D	07			
	7000	SAOP	29 PBI	1435.0	1435.0	17.4	300.0	15.0		
	2800	OTTA	29 PBI	1435.5	1435.5	6.5	7.6	3.4		
	2800	OTTA	4 S/F	1949.0	1951	4.5	34.4	13.8		
	7000	SAOP	4 S/F	1949.9	1950.8	2.7	28.0	14.0		29R
	606	PALE	8 S	1950.1	1950.3	1.2	100			
	8800	PALE	8 S	1950.3	1951.3	1.7	37			
	2695	PALE	8 S	1950.6	1951.0	.9	30			
	4995	PALE	8 S	1950.6	1950.8	1.0	33			
	1415	PALE	8 S	1950.6	1951.0	.7	20			
	2800	OTTA	40 F	2035.0	2038	15.0	2.4			
	2800	OTTA	20 GRF	2100.0	2107	50.0	2.6	1.3		
10	245	LEAR	43 NS	0530.1	0531.8	238.9D	23			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
10	260	ØNDR	43 NS	Ø644.Ø	Ø655.4	452.ØD	155.Ø			
	3750	TYKW	28 PRE	Ø459.Ø	Ø528.Ø	83.Ø	7.Ø	2.Ø		
	3750	TYKW	28 PRE	Ø459.Ø	Ø528.Ø	83.Ø	7.Ø	2.Ø		
	9400	TYKW	28 PRE	Ø500.Ø	Ø527.9	82.Ø	4.Ø	1.5		
	2000	TYKW	28 PRE	Ø500.Ø	Ø528	81.Ø	2.5	1.Ø		
	245	LEAR	8 S	Ø505.1	Ø505.1	.2	23			
	2840	PEKG	22 GRF	Ø510.Ø	Ø528	67.Ø	5.Ø	2.Ø		
	1000	TYKW	45 C	Ø521.Ø	Ø521.3	.5	65.Ø	10.Ø		
	1000	TYKW	8 S	Ø524.2	Ø524.3	.3	30.Ø	7.Ø		
	3100	CRIM	1 S	Ø601.Ø	Ø602.6	2.Ø	5.Ø	2.Ø		
	228	HARS	45 C	Ø620.7	Ø625.3	11.1	220.Ø	60.ØU		
	3100	CRIM	45 C	Ø621.Ø	Ø623.2	10.Ø	137.Ø	45.Ø		
	3100	CRIM		Ø621.Ø	Ø629.1		102.Ø			
	2840	PEKG	45 C	Ø621.Ø	Ø623.7	7.Ø	130.Ø	38.Ø		
	2650	DWIN	45 C	Ø621.Ø	Ø624	14.Ø	105.Ø	40.Ø		
	2840	PEKG	45 C	Ø621.Ø	Ø622.9	115.Ø				
	2000	TYKW		Ø621.6	Ø629.6		36.Ø			
	1000	TYKW	45 C	Ø621.Ø	Ø623.Ø	13.Ø	64.Ø	12.Ø		
	2000	TYKW	45 C	Ø621.Ø	Ø623.2	14.Ø	87.Ø	19.Ø		
	1000	TYKW		Ø621.Ø	Ø629.6		15.Ø			
	19600	BERN	41 F	Ø621.4	Ø630.Ø	21.Ø	75.Ø			
	11800	BERN	41 F	Ø621.4	Ø629.5	27.Ø	111.Ø			
	2695	ATHN	4 S/F	Ø621.5	Ø623.6	21.6D	100			
	29	UPIC	45 C	Ø621.5	Ø623.6U	5.3				
	260	ØNDR	46 C	Ø621.5		12.5	222.ØD	67.Ø		
	500	HIRA	46 C	Ø621.6	Ø622.5	12.Ø	43.Ø	10.Ø		WR
	200	HIRA		Ø621.6	Ø631.7		70.Ø			WL
	200	HIRA		Ø621.6	Ø623.6		80.Ø			Ø
	100	HIRA		Ø621.6	Ø623.6		250.Ø			WR
	100	HIRA	48 C	Ø621.6	Ø626.2U	6.3	60000.ØD			
	200	HIRA	48 C	Ø621.6	Ø625.6	24.Ø	36000.Ø	1000.Ø		WR
	8400	BERN	41 F	Ø621.6	Ø629.5	27.Ø	166.Ø			
	3200	BERN	41 F	Ø621.6	Ø623.5	30.Ø	173.Ø			
	5200	BERN	41 F	Ø621.6	Ø629.5	30.Ø	223.Ø			
	33	UPIC	46 C	Ø621.7		5.4				
	2950	GORK		Ø621.8	Ø629.5		93.Ø			
	536	ØNDR	45 C	Ø621.8	Ø623	13.Ø	48.Ø	9.Ø		
	2950	GORK	45 C	Ø621.8	Ø623.4	9.Ø	112.Ø			
	204	IZMI	41 F	Ø621.8	Ø623.2	5.Ø	60.Ø			
	245	LEAR	47 GB	Ø621.8	Ø625.6	11.Ø	30000			
	950	GORK	4 S/F	Ø621.9	Ø623.Ø	13.2	59.Ø			
	930	BORD	45 C	Ø622.Ø	Ø623	12.Ø	58.Ø	6.Ø		
	808	ØNDR	45 C	Ø622.Ø	Ø623.6	10.Ø	40.Ø	12.Ø		
	9395	PEKG		Ø622.6	Ø623.9	4.Ø	61.Ø			
	9395	PEKG	45 C	Ø622.Ø	Ø622.9		36.Ø	25.Ø		
	127	TORN	45 C	Ø622.ØU	Ø624 U	5.ØU	26000.ØU			DISTURBED
	650	GORK		Ø622.Ø			11.Ø			
	15000	KISV	4 S/F	Ø622.Ø	Ø623.8	4.Ø	50.Ø			
	1415	MANI	4 S/F	Ø622.Ø	Ø623.Ø	10.Ø	64.5	21.5		
	8800	MANI	4 S/F	Ø622.Ø	Ø629.Ø	10.Ø	71.Ø	23.9		
	2695	MANI	4 S/F	Ø622.Ø	Ø623.8	10.Ø	115.9	38.6		
	9400	TYKW		Ø622.Ø	Ø623.8		75.Ø			
	9400	TYKW	45 C	Ø622.Ø	Ø629.6	18.Ø	105.Ø	25.Ø		
	3750	TYKW		Ø622.Ø	Ø623.7		136.Ø			
	3750	TYKW	45 C	Ø622.Ø	Ø629.6	18.Ø	137.Ø	27.Ø		
	410	LEAR	4 S/F	Ø622.1	Ø623.3	12.2	72			
	2695	LEAR	47 GB	Ø622.1	Ø623.6	12.7	119			
	4995	MANI	4 S/F	Ø622.2	Ø623.8	9.8	162.8	54.3		
	1415	LEAR	4 S/F	Ø622.3	Ø623.Ø	11.5	74			
	17000	NOBE	21 GRF	Ø622.3	Ø629.6	29.Ø	54.Ø			R
	1415	ATHN	4 S/F	Ø622.3	Ø623.Ø	20.8D	68			
	9100	GORK		Ø622.5	Ø632.2	62.Ø	17.Ø			
*	4995	ATHN	4 S/F	Ø622.5	Ø629.5	17.1	119			
	9100	GORK		Ø622.5	Ø629.6		110.Ø			
	204	IZMI	7 C	Ø622.5	Ø623.5	2.5	124.Ø	80.Ø		
	606	LEAR	4 S/F	Ø622.5	Ø623.1	10.8	38			
	9100	GORK	46 C	Ø622.5	Ø623.9	9.8	70.Ø			
	4995	LEAR	47 GB	Ø622.5	Ø629.5	12.3	139			
	15400	LEAR	47 GB	Ø622.6	Ø629.6	12.9	66			
	8800	LEAR	47 GB	Ø622.6	Ø629.5	12.5	130			
	606	MANI	4 S/F	Ø622.6	Ø624.Ø	9.7	23.2	7.7		
	650	GORK	46 C	Ø622.9	Ø623.7	10.8	22.Ø			
	650	GORK	46 C	Ø622.9	Ø623.7	10.8	22.Ø			
	204	IZMI	17 GB	Ø625.Ø	Ø626.5	4.7	9500.Ø	6500.Ø		
	9395	PEKG	3 S	Ø627.Ø	Ø629.6	23.Ø	96.Ø	15.Ø		
	2840	PEKG	3 S	Ø628.Ø	Ø629.8	18.Ø	105.Ø	10.Ø		
	204	IZMI	41 F	Ø628.Ø	Ø631.5	5.Ø	70.Ø			
	15000	KISV	4 S/F	Ø628.5	Ø629.6	3.Ø	85.Ø			
	204	IZMI	5 S	Ø629.Ø	Ø629.8	2.Ø	110.Ø	80.Ø		
	33	UPIC	45 C	Ø629.4	Ø631.6	3.2				
	2950	GORK	29 PBI	Ø630.8	Ø630.9	11.5	14.Ø	7.Ø		
	3100	CRIM	29 PBI	Ø631.Ø	Ø631.Ø	17.Ø	15.Ø	5.Ø		
	650	GORK	29 PBI	Ø632.4	Ø632.8	15.2	3.Ø	1.5		
	1000	TYKW	30 PBI	Ø634.Ø		10.Ø	1.Ø	.5		
	2000	TYKW	29 PBI	Ø635.Ø		15.Ø	2.5	1.Ø		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	POLARIZATION OR REMARKS
10	1000	TYKW	8	S	0638.4	0638.4	.1	4.5	1.5		
	3750	TYKW	30	PBI	0640.0		60.0	6.0	1.5		
	9400	TYKW	30	PBI	0640.0		40.0	8.0	1.5		
	930	BORD	8	S	0643.9	0644	.2	34.0	3.0		
	2000	TYKW	20	GRF	0651.0	0656	30.0	2.0	1.0		
	3750	TYKW	5	S	0652.0	0654	7.0	2.0	.7		
	2840	PEKG	22	GRF	0653.0	0702.8	45.0	8.0	3.3		
	204	IZMI	5	S	0655.0	0655.0	.8	90.0	60.0		
	1000	TYKW	5	S	0655.0	0655.7	2.0	2.0	.5		
	606	LEAR	8	S	0655.1	0655.3	.7	330			
	245	LEAR	8	S	0655.1	0655.3	.4	320			
	410	LEAR	8	S	0655.1	0655.3	.7	130			
	536	ØNDR	8	S	0655.7	0655.7	.4	270.0			
	3750	TYKW	5	S	0701.0	0702.7	3.0	9.0	3.0		
	5200	BERN	1	S	0701.2	0702.7	7.0	11.0			
	3200	BERN	1	S	0701.2	0702.7	7.0	8.0			
	2950	GORK	1	S	0701.4	0702.7	2.0	5.0	2.5		
	9400	TYKW	5	S	0702.0	0702.7	1.5	6.0	2.0		
	9400	TYKW	5	S	0703.5	0703.7	.5	6.0	2.0		
	3750	TYKW	29	PBI	0704.6		10.0	2.0	1.0		
	2840	PEKG	22	GRF	0855.0	0909.4	35.0	15.0	5.4		
	9395	PEKG	20	GRF	0905.0	0910	10.0	6.6	2.0		
	3750	TYKW	5	S	0905.0	0909.6U	10.0	9.0U	3.0U		
	5200	BERN	20	GRF	0905.2	0910.0	24.0	22.0			
	3200	BERN	20	GRF	0905.2	0909.3	24.0	15.0			
	8400	BERN	20	GRF	0905.4	0910.0	15.0	18.0			
	11800	BERN	20	GRF	0905.8	0910.0	12.0	12.0			
	9100	GORK	1	S	0906.0	0909.4	4.8	8.0			
	2950	GORK	1	S	0906.2	0909.3	8.2	10.0			
	4995	LEAR	8	S	0909.0	0909.3	2.0	13			
	2695	LEAR	8	S	0909.1	0909.3	1.9	11			
	2800	OTTA	20	GRF	1117.0	1122	25.0	2.0	1.0		
	9100	GORK	20	GRF	1150.0	1151.2	9.5	6.0			
	536	ØNDR	2	S/F	1229.1	1229.7	1.0	28.0	2.0		
	2800	OTTA	1	S	1722.0	1723	4.0	2.0	1.0		
	7000	SAOP	1	S	1853.7	1854.1	1.3	10.0	5.0		8
	245	PALE	8	S	1909.8	1909.8	.2	40			
	7000	SAOP	4	S/F	1927.9	1928.4	.9	45.0	22.0		7L
11	260	ØNDR	44	NS	0544.0E		506.0D	212.0			
	245	PALE	8	S	0832.3	0832.6	.3	96			
	3750	TYKW	20	GRF	0310.0	0350	140.0	3.0	1.5		
	2000	TYKW	20	GRF	0320.0	0350	150.0	2.0	1.0		
	9400	TYKW	5	S	0510.0	0510.9	2.0	3.0	1.0		
	2000	TYKW	5	S	0625.0	0629	15.0	2.0	.7		
	3750	TYKW	5	S	0627.0	0628.5	13.0	2.0	1.0		
	245	LEAR	8	S	0822.1	0822.3	.4	37			
	127	TORN	4	S/F	0839.9	0840.5	1.2	270.0	90.0		
	245	LEAR	8	S	0922.1	0922.3	.5	38			
	930	BORD	41	F	0925.3	0925.6	.5	17.0	2.0		
	245	SGMR	8	S	0939.3	0940.1	1.7	400			
	228	HARS	45	C	0939.5	0940.5	1.4	80.0	20.0		
	204	IZMI	7	C	0939.5	0940.0	1.5	420.0	270.0		
	33	UPIC	4	S/F	0939.8	0940.4	2.0	2.0			
	29	UPIC	4	S/F	0940.0	0940.7	1.8				
	930	BORD	8	S	0940.4	0940.4	.1	17.0	1.0		
	33	UPIC	45	C	1142.9	1143.7	2.7				
	204	IZMI	41	F	1143.0	1149.0	7.0	190.0			
	29	UPIC	45	C	1143.1	1144.3	2.7				
	245	SGMR	47	GB	1148.1	1149.0	1.4	640			
	2800	OTTA	21	GRF	1900.0	2020	495.0	13.6	6.8		
	2800	OTTA	1	S	1904.0	1908.5	7.0	2.0	1.5		
	2800	OTTA	1	S	1914.0	1916	5.0	2.0	1.5		
	2800	OTTA	1	S	1927.0	1929.5	5.0	3.0	1.5		
	1000	TYKW	30	PBI	2100.0E		340.0D	3.0D	1.5D		
	3750	TYKW	30	PBI	2100.0E		300.0D	14.0D	7.0D		
	9400	TYKW	30	PBI	2100.0E		300.0D	24.0D	12.0D		
	2000	TYKW	30	PBI	2100.0E		320.0D	10.0D	5.0D		
	3750	TYKW	5	S	2339.0	2340.5	5.0	4.0	1.0		
12	2695	PENT	4	S/F	0008.0	0008.8	4.0	12.0	3.6		
	9395	PEKG	20	GRF	0013.0	0014.1	16.0	8.0	4.0		
	2000	TYKW	45	C	0013.0	0013.9	3.0	56.0	3.5		
	3750	TYKW	45	C	0013.6	0013.9	3.0	20.0	6.0		
	1000	TYKW	45	C	0013.0	0013.9	3.0	26.0	2.0		
	4995	LEAR	8	S	0013.1	0013.8	1.7	19			
	2695	LEAR	4	S/F	0013.3	0013.8	2.2	11			
	606	LEAR	8	S	0013.3	0013.8	.5	28			
	8800	LEAR	8	S	0013.5	0014.0	1.3	13			
	9400	TYKW	5	S	0013.5	0013.9	25.0	7.0	3.0		
	1415	LEAR	8	S	0013.8	0013.8	.3	55			
	2840	PEKG	21	GRF	0013.9	0013.9	24.0	14.1	5.0		
	2000	TYKW	29	PBI	0016.0		30.0	2.0	1.0		
	3750	TYKW	29	PBI	0016.0		30.0	3.0	1.5		
	208	VORO	4	S/F	0025.0	0028	5.0	43.0			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
12	410	LEAR	8	S	0136.6	0136.8	.4	66			
	2800	TYKW	20	GRF	0400.0	0510	180.0	2.0	1.0		
	3750	TYKW	20	GRF	0410.0	0520	170.0	2.0	1.0		
	606	LEAR	8	S	0645.8	0646.0	.3	08			
	245	LEAR	8	S	0645.8	0646.0	.3	05			
	410	LEAR	8	S	0645.8	0646.0	.3	13			
	245	LEAR	8	S	0715.0	0715.1	.5	22			
	127	TORN	2	S/F	1023.0	1023.7	1.0	30.0	10.0		
	33	UPIC	42	SER	1200.7		18.2				
	29	UPIC	42	SER	1200.9	1222.7	17.9				
	260	ØNDR	4	S/F	1222.4	1223.2	2.0	28.0	5.0		
	2800	OTTA	20	GRF	1332.0	1343	15.0	2.6	1.3		
	2800	OTTA	20	GRF	1405.0	1435	55.0	2.6			
	2800	OTTA	20	GRF	1700.0	1805	135.0	2.2	1.1		
	245	SGMR	8	S	1713.5	1713.8	1.3	45			
	930	BORD	8	S	1714.5	1714.5	.1	44.0	1.0		
	2800	OTTA	8	S	2021.0	2021	.1	17.8			
	2800	OTTA	20	GRF	2150.0	2210	80.0	2.2	1.1		
	200	HIRA	41	F	2207.3	2207.6	5.5	1000.0			Ø
	100	HIRA	41	F	2207.5	2210.6	5.4	900.0			
	500	HIRA	41	F	2207.5	2211.1	5.0	50.0			WR
	2000	TYKW	45	C	2207.5	2208.0	1.0	8.0	1.0		
	1000	TYKW	45	C	2207.5	2211.3	5.0	11.0	1.5		
	410	PALE	8	S	2210.8	2211.0	.3	69			
	3750	TYKW	21	GRF	2330.0	2343	40.0	2.0	1.0		
	2695	PENT	1	S	2345.0	2347	5.0	2.2	1.1		
	3750	TYKW	5	S	2346.0	2346.7	12.0	1.5	.7		
13	245	LEAR	43	NS	0032.8	0036.3	265.3	32			
	33	UPIC	43	NS	0525.8		450.0				
	29	UPIC	43	NS	0525.8	0525.9	449.9				
	260	ØNDR	44	NS	0607.ØE		480.ØD	61.0			
	245	LEAR	43	NS	0654.6	0658.5	154.4D	110			
	208	VORO	4	S/F	0004.0	0006	3.0	50.0			
	245	LEAR	8	S	0021.5	0021.8	.5	22			
	245	LEAR	4	S/F	0026.8	0028.1	3.2	30			
	410	LEAR	4	S/F	0026.8	0028.1	3.2	08			
	245	LEAR	4	S/F	0525.6	0525.6	2.2	38			
	100	HIRA	42	SER	0527.5	0527.5	3.3	69000.0			WR
	410	LEAR	8	S	0636.5	0636.6	.1	30			
	3750	TYKW	20	GRF	0645.0	0706	60.0	3.0	1.0		
	2000	TYKW	20	GRF	0645.0	0706	45.0	3.0	1.0		
	204	IZMI	4	S/F	0654.7	0655.1	1.0	110.0	45.0		
	410	LEAR	8	S	0658.1	0700.0	2.0	30			
	204	IZMI	5	S	0658.2	0658.3	.7	80.0	45.0		
	204	IZMI	4	S/F	0839.5	0840.5	3.0	42.0	20.0		
	2800	OTTA	20	S	1340.0	1355	40.0	2.2	1.1		
	2800	OTTA	1	S	1452.0	1457	8.0	2.8	1.4		
	2800	OTTA	20	GRF	1547.0	1550	40.0	2.8	1.4		
	2800	OTTA	21	GRF	1720.6	1805	75.0	2.8	1.4		
	2800	OTTA	1	S	1740.0	1742	6.0	3.0	1.5		
	2800	OTTA	1	S	1757.0	1758.5	5.0	3.0	1.5		
	2800	OTTA	20	GRF	2120.0	2212	75.0	3.0	2.1		
	3750	TYKW	5	S	2156.0	2156.5	1.0	3.0	1.0		
14	260	ØNDR	44	NS	0600.ØE		500.ØD	24.0			
	29	UPIC	43	NS	0656.1	1104.5	464.2				
	33	UPIC	43	NS	0656.4	1104.2	464.1				
	127	TORN	44	NS	1100.ØE		21.ØD		5.0		VØ,DISTURBED
	245	LEAR	8	S	0007.1	0007.3	.5	150			
	245	PALE	8	S	0007.1	0007.3	.5	180			
	245	LEAR	4	S/F	0523.1	0523.1	406.2	65			
	245	LEAR	47	GB	0902.3	0902.6	.5	62			
	2800	OTTA	20	GRF	1320.0	1345	75.0	2.8	1.4		
	2800	OTTA	20	GRF	1710.0	1920	280.0	10.4	4.0		
	245	PALE	47	GB	2103.8	2105.3	10.5	1900			
	410	PALE	47	GB	2104.6	2105.1	9.7	740			
	606	PALE	47	GB	2105.1	2105.3	5.2	300			
	2800	OTTA	240	R	2200.0	2220	20.0	2.0			
	2695	PENT	20	GRF	2320.0	2350	140.ØD	9.4			
	2000	TYKW	21	GRF	2320.0	2400	300.0	10.0	4.0		
	1000	TYKW	21	GRF	2320.0	0020	300.0	3.0	1.5		
	9400	TYKW	20	GRF	2320.0	2350	230.0	9.0	4.0		
	3750	TYKW	20	GRF	2320.0	2350	260.0	10.0	4.0		
	1000	TYKW	5	S	2325.0	2325.2	2.0	3.0	.5		
15	260	ØNDR	44	NS	0540.ØE		510.ØD	25.0			
	127	TORN	44	NS	0600.ØE	1032.7	440.ØD	260.0	2.0		V1,DISTURBED
	245	LEAR	43	NS	0710.0	0732.8	95.ØD	36			
	33	UPIC	43	NS	0711.8	1054.2	290.0				
	29	UPIC	43	NS	0712.0	1054.5	290.0				
	245	PALE	43	NS	1620.0	0040.0	745.ØD	139			
	200	HIRA	44	NS	1920.ØE	0257	870.ØD	280.0	5.0		MR
	208	VORO	44	NS	2100.ØE		240.ØD		10.0		
	2000	TYKW	20	S	0341.0	0341.5	1.0	.5			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
15	1000	TYKW	45	C	0341.2	0341.6	.6	165.0	40.0		
	1000	TYKW	5	S	0343.4	0343.6	.6	3.5	1.0		
	3750	TYKW	5	S	0731.5	0732.2	15.0	4.0	1.0		
	930	BORD	41	F	0836.0	0836.3	.6	39.0	2.0		
	3100	CRIM	26	FAL	0931.0	1200.0		10.0			
	810	KRAK	8	S	1051.3	1051.3	.2	9.0			
	430	KRAK	8	S	1051.4	1051.4	.2	17.0			
	430	KRAK	2	S/F	1052.5	1053.4	1.6	28.0	4.0		
	2800	OTTA	20	GRF	1840.0	1845	30.0	1.0	.3		
	245	PALE	8	S	1902.6	1903.0	.5	100			
	2800	OTTA	20	GRF	2010.0	2025	35.0	1.4	.7		
	2800	OTTA	240	R	2140.0	2240	60.0	2.4	1.2		
	245	PALE	8	S	2203.1	2203.5	.5	61			
	245	PALE	8	S	2341.3	2341.6	.5	119			
16	245	LEAR	43	NS	0100.0	0105.0	509.0D	139			
	260	ØNDR	44	NS	0558.0E		491.0D	78.0	3.0		
	204	IZMI	43	NS	0600.0		360.0D	90.0			
	127	TORN	44	NS	0620.0E		580.0D		17.0		VØ
	245	SGMR	43	NS	0910.0E	1004.0	54.0U	50			
	200	HIRA	44	NS	1919.0E	0335	870.0D	15.0	5.0		WR
	208	VORO	44	NS	2100.0E		24.0D		10.0		
	245	LEAR	43	NS	2320.0	0314.1	649.0D	180			
	2695	PENT	20	GRF	0000.0	0045	80.0	2.0	1.0		
	3750	TYKW	20	GRF	0215.0	0225	5.0	6.0	2.0		
	9400	TYKW	20	GRF	0220.0	0225	40.0	4.0	2.0		
	3750	TYKW	21	GRF	0440.0	0700	270.0D	5.0	3.0D		
	2000	TYKW	21	GRF	0440.0	0700	270.0D	5.0	3.0D		
	9400	TYKW	21	GRF	0450.0	0700	250.0D	8.0	5.0D		
	1000	TYKW	21	GRF	0450.0	0700	260.0D	3.0	2.0D		
	410	LEAR	8	S	0551.3	0551.5	.3	64			
	245	LEAR	8	S	551.3	0551.5	.8	56			
	1000	TYKW	45	C	0641.0	0642.3	3.0	8.0	1.5		
	3750	TYKW	5	S	0641.0	0642	4.0	2.0	1.0		
	2000	TYKW	5	S	0641.0	0641.8	2.0	2.5	1.0		
	127	TORN	7	C	0641.2	0641.7	1.2	400.0	200.0		
	9400	TYKW	5	S	0641.4	0641.7	1.0	4.0	1.5		
	204	IZMI	8	C	0641.5	0642.0	1.5	420.0	300.0		
	1415	ATHN	4	S/F	0743.5	0745.6	4.5D	29			
	9100	GORK	20	GRF	0744.0	0745.4	11.2	9.0			
	2000	TYKW	21	GRF	0744.0	0813	75.0	3.0	1.5		
	2000	TYKW	45	C	0744.0	0746.6	5.0	6.0	1.5		
	3750	TYKW	21	GRF	0744.0	0803	65.0	5.0	2.5		
	9395	PEKG	20	GRF	0744.0	0750	27.0	8.0	5.0		
	3750	TYKW	5	S	0744.0	0745.3	6.0	10.0	3.0		
	1415	LEAR	4	S/F	0744.1	0745.8	5.0	32			
	4995	LEAR	4	S/F	0744.3	0745.0	30.7	11			
	4995	ATHN	4	S/F	0744.3	0745.3	3.3	10			
	8800	LEAR	4	S/F	0744.3	0745.3	30.7	10			
	2695	LEAR	4	S/F	0744.5	0745.1	30.5	10			
	9400	TYKW	20	GRF	0744.5	0745.4	55.0	8.0	4.0		
	930	BORD	45	C	0744.6	0745.6	3.2	19.0	5.0		
	2695	ATHN	4	S/F	0744.6	0745.0	3.4D	11			
	2950	GORK	20	GRF	0744.7	0745.2	285.0E	6.0	3.0		
	950	GORK	2	S/F	0744.8	0745.8	3.9	18.0	9.0		
	1000	TYKW	45	C	0744.8	0745.6	2.5	20.0	7.0		
	1000	TYKW	45	C	0744.8	0745.6	2.5	20.0	7.0		
	650	GORK	1	S	0745.0	0747.0	3.3	3.0	1.5		
	810	KRAK	3	S	0745.0	0745.0	2.3	16.0	8.0		
	15400	LEAR	4	S/F	0746.5	0750.0	8.5	10			
	930	BORD	8	S	0811.1	0811.2	.2	77.0	2.0		
	808	ØNDR	45	C	1014.0	1017.7	10.0	40.0	3.0		
	536	ØNDR	45	C	1014.2	1019.4	5.5	46.0	2.0		
	2800	OTTA	20	GRF	1250.0	1320	65.0	2.4	1.2		
	127	TORN	7	C	1416.4	1416.7	1.3	60.0	40.0		
	2800	OTTA	20	GRF	1435.0	1550	115.0	2.6	2.0		
	2800	OTTA	1	S	1840.0	1845	10.0	1.6	.8		
	2800	OTTA	21	GRF	1950.0	2001	55.0	6.4	2.4		
	2800	OTTA	4	S/F	1956.0	1958.2	4.0	21.6	8.2		
	410	PALE	8	S	2029.0	2030.1	.5	25			
	410	PALE	8	S	2121.3	2121.5	.3	139			
	245	PALE	8	S	2121.3	2121.5	.5	70			
	3750	TYKW	21	GRF	2200.0	2300	150.0	3.0	1.5		
	9400	TYKW	5	S	2320.0	2322	20.0	3.0	1.5		
	100	HIRA	41	F	2326.0	2326.4	1.2	485.0			WR
17	33	UPIC	43	NS	0357.2		475.1				
	29	UPIC	43	NS	0357.4	0949.4	475.0				
	260	ØNDR	44	NS	0548.0E		502.0D	185.0	5.0		
	204	IZMI	43	NS	0600.0		360.0D	60.0			
	127	TORN	44	NS	0700.0E		300.0D		2.0		VØ,DISTURBED
	200	HIRA	44	NS	1918.0E	2212	870.0D	45.0	5.0		MR
	208	VORO	44	NS	2100.0E		240.0D		14.0		
	245	LEAR	43	NS	2320.0	0135.3	610.0D	240			
	4995	MANI	3	S	0002.0	0004.0	3.0	61.6	20.5		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES
JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
17	9400	TYKW	45 C	0002.0	0003.9	2.0D	69.0	20.0D		
	4995	LEAR	4 S/F	0002.1	0003.8	3.0	70			
	8800	MANI	4 S/F	0002.2	0004.2	2.8	60.6	20.2		
	8800	LEAR	4 S/F	0002.3	0003.8	2.8	110			
	15400	LEAR	4 S/F	0002.3E	0003.8	2.2	40			
	17000	NOBE	21 GRF	0002.3	0003.8	22.0	33.0			L
	2695	PENT	3 S	0002.5	0004	5.0	34.0	5.0		
	208	VORO	4 S/F	0003.0	0004	2.0	150.0D			
	2000	TYKW	5 S	0003.0	0004.0	2.0D	24.0	8.0D		
	3750	TYKW	45 C	0003.0E	0003.9	2.0D	50.0	15.0D		
	1000	TYKW	45 C	0003.0	0003.8	10.0	15.5	3.0		
	2695	LEAR	8 S	0003.1	0004.1	1.9	40			
	100	HIRA	46 C	0003.1	0004.2	3.8	16000.0	1200.0		WR
	606	LEAR	47 GB	0003.1	0003.8	2.2	570			
	200	HIRA	46 C	0003.1	0004.0	2.0	1800.0	430.0		0
	410	LEAR	47 GB	0003.1	0003.8	2.2	620			
	245	LEAR	47 GB	0003.1	0003.8	2.5	2300			
	2695	MANI	3 S	0003.1	0004.2	1.9	32.7	10.9		
	606	MANI	4 S/F	0003.2	0004.0	1.8	86.5	28.8		
	500	HIRA	7 C	0003.3	0003.9	2.6	90.0	150.0		WR
	1415	LEAR	8 S	0003.5	0004.1	1.3	30			
	1415	MANI	3 S	0003.5	0004.1	2.5	29.8	9.9		
	3750	TYKW	29 PBI	0005.0		15.0	4.0	2.0		
	9400	TYKW	29 PBI	0007.0E		20.0D	8.0D	4.0D		
	245	LEAR	4 S/F	0008.6	0009.3	2.2	100			
	606	LEAR	8 S	0009.1	0009.3	1.2	25			
	1000	TYKW	45 C	0107.0	0113.6	12.0	17.0	2.5		
	2000	TYKW	5 S	0108.0	0113	15.0	2.5	1.0		
	9400	TYKW	5 S	0132.5	0133.2	2.5	34.0	8.0		
	2840	PEKG	3 S	0132.5	0133.3	3.5	14.0	3.0		
	3750	TYKW	5 S	0132.5	0133.2	2.5	37.0	8.0		
	9395	PEKG	5 S	0132.6	0133.3	3.4	35.4	5.0		
	8800	LEAR	8 S	0132.8	0133.1	.8	48			
	4995	PALE	8 S	0132.8	0133.1	.8	59			
	2695	PENT	1 S	0132.8	0133.2	1.0	7.4	2.4		
	15400	LEAR	8 S	0133.0	0133.1	.1	16			
	8800	PALE	8 S	0133.0	0133.1	.3	47			
	3750	TYKW	29 PBI	0135.0		20.0	3.0	1.5		
	9400	TYKW	29 PBI	0135.0		20.0	3.0	1.5		
	1000	TYKW	45 C	0240.0	0243.2	5.0	12.0	2.0		
	606	PALE	8 S	0242.3	0243.0	1.5	139			
	9395	PEKG	1 S	0250.0	0252	5.0	8.1			
	9400	TYKW	5 S	0250.5	0251.8	9.0	11.0	3.0		
	8800	LEAR	8 S	0251.6	0251.8	.2	16			
	3750	TYKW	5 S	0256.0	0256.6	3.0	3.0	1.0		
	9395	PEKG	7 C	0316.0	0324.6	14.0	22.1	5.0		
	3750	TYKW	21 GRF	0317.0	0340	150.0	4.0	2.0		
	2000	TYKW	21 GRF	0318.0	0407	145.0	3.0	1.0		
	1000	TYKW	5 S	0319.0	0319.5	.5	3.0	1.0		
	1000	TYKW	45 C	0319.7	0320.2	.7	40.0	6.0		
	2000	TYKW	45 C	0322.0	0324.3	5.0	9.0	2.5		
	1000	TYKW	45 C	0322.0	0323.5	5.0	15.0	3.5		
	9400	TYKW	5 S	0322.0	0324.3	5.0	25.0	5.0		
	606	LEAR	47 GB	0322.0	0325.1	11.3	300			
	17000	NOBE	1 S	0322.4	0324.4	4.0	33.0			L
	1415	LEAR	4 S/F	0322.6	0324.1	3.7	15			
	8800	LEAR	4 S/F	0322.6	0324.3	4.2	35			
	2695	LEAR	S/F	0322.8	0324.1	3.3	10			
	15400	LEAR	4 S/F	0322.8	0324.3	6.0	37			
	3750	TYKW	5 S	0323.0	0324.4	3.0	5.0	1.5		
	410	LEAR	4 S/F	0323.1	0324.1	9.2	50			
	4995	LEAR	4 S/F	0323.1	0324.5	2.4	10			
	2840	PEKG	3 S	0324.0	0324.4	14.0	18.0	7.3		
	1000	TYKW	45 C	0341.8	0342.3	.7	6.0	1.0		
	1000	TYKW	45 C	0342.9	0343.2	.6	35.0	13.0		
	245	LEAR	4 S/F	0346.1	0346.1	212.2	88			
	9400	TYKW	5 S	0357.4	0357.8	1.0	6.0	2.0		
	606	PALE	8 S	0359.8	0400.1	1.3	400			
	410	LEAR	8 S	0407.8	0409.1	1.7	130			
	606	LEAR	47 GB	0410.1	0411.1	1.9	580			
	606	PALE	8 S	0410.5	0411.3	1.1	420			
	1000	TYKW	45 C	0411.0	0411.3	.6	3.0	.5		
	606	LEAR	47 GB	0415.3	0415.5	.7	780			
	1000	TYKW	45 C	0415.4	0415.5	.8	4.0	1.0		
	2000	TYKW	45 C	0415.5	0416.1	1.0	1.5	.5		
	1000	TYKW	45 C	0418.2	0418.3	1.0	4.0	1.0		
	3750	TYKW	21 GRF	0420.0	0432	70.0	2.0	1.0		
	2000	TYKW	21 GRF	0425.0	0433	70.0	2.0	1.0		
	2950	GORK	20 GRF	0426.4	0430.4	31.4	8.0	4.0		
	245	LEAR	8 S	0428.5	0428.8	.3	130			
	1000	TYKW	45 C	0429.5	0430.4	2.0	58.0	7.0		
	410	LEAR	8 S	0429.6	0429.8	.4	110			
	606	LEAR	47 GB	0430.6	0430.3	.6	890			
	9400	TYKW	5 S	0430.0	0430.4	2.0	6.0	1.5		
	3750	TYKW	5 S	0430.0	0430.5	1.0	7.0	2.5		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
17	2000	TYKW	5	S	0430.2	0430.5	.8	5.0	2.0		
	9100	GORK	1	S	0430.2	0430.5	.8	7.0	3.0		
	1000	TYKW	5	S	0459.0	0459.3	1.0	26.0	4.0		
	606	LEAR	8	S	0459.1	0501.1	2.0	420			
	1000	TYKW	5	S	0500.7	0501.2	.6	28.0	6.0		
	9395	PEKG	7	C	0531.0	0535.7	11.0	11.0	2.2		
	9400	TYKW	45	C	0535.0	0535.6	4.5	15.0	3.0		
	9395	PEKG	1	S	0751.7	0752.3	1.3	5.0	2.2		
	536	ØNDR	42	SER	0914.0	0947.8	191.0	84.0			
	650	GORK	46	C	0944.5	0947.7	10.0	86.0			
	650	GORK			0944.5	0949.4		86.0			
	606	SGMR	4	S/F	0946.1	0949.1	9.4D	160			
	430	KRAK	46	C	0946.2	0949.7	7.1	490.0D	15.0		
	410	SGMR	4	S/F	0946.3	0949.1	6.7D	170			
	9100	GORK	21	GRF	0946.3	1001.6	37.0	9.0			
	810	KRAK			0946.9	0949.3		70.0			
	810	KRAK	46	C	0946.9	0947.5	5.0	91.0	29.0		
	930	BORD	41	F	0947.0	0947.9	5.0	48.0	4.0		
	3100	CRIM			0947.0	0949.4		22.0	7.0		
	2650	DWIN	2	S/F	0947.0	0949	3.0	20.0	10.0		
	245	SGMR	4	S/F	0947.0	0948.5	7.6	180			
	808	ØNDR	42	SER	0947.0	1151.6	159.0	102.0			
	2950	GORK			0947.0	0949.2		21.0			
	3100	CRIM	45	C	0947.0	0947.8	4.0	17.0			
	2950	GORK	45	C	0947.0	0947.5	3.8	14.0			
	4995	ATHN	4	S/F	0947.1	0947.6	8.0	35			
	2695	ATHN	4	S/F	0947.1	0949.1	3.9D	19			
	950	GORK	46	C	0947.1	0947.9	8.4	28.0			
	204	IZMI	41	F	0947.2	0948.5	5.1	300.0			
	5200	BERN			0947.8	0949.0	25.0	74.0			ONLY PAPER REC
	3200	BERN			0947.8	0948.3	20.0	.0			ONLY PAPER REC
	950	GORK			0949.4	0949.4		28.5			
	650	GORK	4	S/F	1032.0	1034.8	3.9	72.0			
	810	KRAK	5	S	1033.3	1034.5	1.6	55.0	13.0		
	950	GORK	1	S	1034.3	1035.0	1.4	8.4	4.0		
	930	BORD	46	C	1034.3	1034.8	1.1	16.0	3.0		
	9100	GORK	1	S	1034.4	1034.7	1.5	14.0	7.0		
	2950	GORK	1	S	1034.5	1034.7	.7	5.7	2.8		
	810	KRAK	8	S	1055.9	1055.9	.2	110.0			
	810	KRAK	8	S	1116.6	1116.6	.2	18.0			
	810	KRAK			1137.2	1142.0		25.0			
	810	KRAK	42	SER	1137.2	1139.6	14.5	34.0			
	810	KRAK			1137.2	1151.4		300.0			
	930	BORD	41	F	1139.3	1139.6	.8	32.0	3.0		
	950	GORK	2	S/F	1139.4	1139.9	.9	16.6			
	9100	GORK	1	S	1139.5	1139.9	1.0	5.0	2.0		
	430	KRAK	8	S	1139.5	1139.6	.8	82.0			
	2800	OTTA	1	S	1139.7	1139.9	1.0	3.2	1.2		
	930	BORD	46	C	1151.2	1151.5	1.0	88.0	4.0		
	3100	CRIM	1	S	1151.4	1151.8	1.0	11.0	4.0		
	2800	OTTA	3	S	1151.5	1151.8	1.0	10.0	4.0		
	430	KRAK	8	S	1158.0	1158.5	1.0	110.0			
	930	BORD	46	C	1223.6	1223.9	1.4	233.0	4.0		
	810	KRAK	41	F	1223.6	1224.1	1.8	80.0			
	930	BORD	8	S	1304.2	1304.2	.1	20.0	1.0		
	2800	OTTA	1	S	1622.5	1622.9	1.0	3.8	1.8		
	2800	OTTA	21	GRF	1720.0	1820	130.0	2.6	1.3		
	2800	OTTA	8	S	1814.0	1814.3	.5	11.2			
	245	PALE	8	S	2016.6	2017.0	.5	230			
	245	PALE	8	S	2139.6	2140.0	.7	230			
	2800	OTTA	21	GRF	2140.0	2255	120.0	7.4	2.6		
	2000	TYKW	21	GRF	2140.0	2150	120.0	2.0	1.0		
	3750	TYKW	21	GRF	2140.0	2150	120.0	3.0	1.5		
	1000	TYKW	20	GRF	2145.0	2250	150.0	3.0	1.5		
	2000	TYKW	21	GRF	2240.0	2300	50.0	1.5	.7		
	3750	TYKW	21	GRF	2242.0	2258	50.0	8.0	3.5		
	9400	TYKW	20	GRF	2250.0	2254	40.0	8.0	3.0		RAIN
	3750	TYKW	5	S	2252.0	2253.9	5.0	15.0	4.0		
	2800	OTTA	1	S	2253.2	2254	2.0	4.4	2.2		
	2000	TYKW	5	S	2352.0	2354.0	4.0	2.5	1.0		
18	260	ØNDR	44	NS	0543.0E		510.0D	44.0	3.0		
	245	PALE	43	NS	1630.0	0058.1	737.0D	220			
	245	PALE	43	NS	1744.6E	2329.0	631.5D	119			
	208	VORO	44	NS	2100.0E		240.0D		9.0		
	245	LEAR	43	NS	2320.0	0515.0	610.0D	100			
	3750	TYKW	21	GRF	0010.0	0120	50.0	5.0	2.5		
	2695	PENT	21	GRF	0100.0	0119	50.0D	5.8			
	2000	TYKW	21	GRF	0103.0	0120	170.0	4.0	1.5U		
	1000	TYKW	45	C	0112.0	0117.6	12.0	9.0	2.0		
	2000	TYKW	5	S	0117.3	0117.6	1.0	4.0	1.0		
	3750	TYKW	5	S	0117.3	0117.6	.7	3.5	1.0		
	606	LEAR	8	S	0117.3	0117.6	.5	13			
	410	LEAR	8	S	0117.5	0117.6	.3	09			
	2695	PENT	2	S/F	0117.5	0117.6	1.0	4.0	1.8		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
				UT	UT	MINUTES	PEAK	MEAN		
18	1000	TYKW	29 PBI	0124.0		90.0	2.0	1.0U		
	9400	TYKW	20 GRF	0140.0U	0200 U	75.0U	8.0U	4.0U		RAIN
	3750	TYKW	20 GRF	0150.0U	0219	130.0U	6.0	3.0U		
	2000	TYKW	20 GRF	0600.0	0610	40.0	2.0	1.0		
	3750	TYKW	20 GRF	0603.0E	0625	60.0D	3.0	1.5D		
	930	BORD	8 S	0728.4	0728.7	.4	73.0	2.0		
	3750	TYKW	5 S	0800.0	0801.7	6.0	3.5	1.5		
	2950	GORK	20 GRF	0905.6	1012.0	18.0E	20.0			
[	3200	BERN		0936.0	1012.3	104.0	.0			ONLY PAPER REC
[	5200	BERN		0936.0	1012.3	104.0	22.0			ONLY PAPER REC
	9100	GORK	20 GRF	0958.0E	1009.0	122.0E	20.0			
	2800	OTTA	26A FAL	1100.0	1620	320.0	-17.2			
[	536	@NDR	4 S/F	1236.5	1237.4	1.0	130.0	85.0		
[	260	@NDR	4 S/F	1237.0	1237.8	1.5	138.0	62.0		
	2800	OTTA	22 GRF	1505.0	1520	45.0	4.6			
	2800	OTTA	22 GRF	1807.0	1817	23.0	4.0	2.2		
	930	BORD	8 S	1812.7	1812.7	.1	26.0	1.0		
[	2800	OTTA	27A RF	2000.0		215.0	2.4	2.1		
[	2800	OTTA	24 R	2000.0	2030	30.0	2.4	1.2		
	2800	OTTA	24P R	2030.0		160.0	2.4			
	2800	OTTA	20 GRF	2035.0	2040	12.0	2.0	1.0		
	2800	OTTA	26 FAL	2310.0	2335	25.0	-2.4	-1.2		
19	260	@NDR	44 NS	0549.0E		503.0D	84.0	4.0		
[	245	SGMR	43 NS	0910.0	1302.6	590.0D	360			
[	245	LEAR	43 NS	2320.0	0746.1	610.0D	75			
[	2695	PENT	20 GRF	0040.0	0047	50.0	3.6	1.0		
[	3750	TYKW	20 GRF	0040.0	0050	70.0	4.0	2.0		
[	2000	TYKW	20 GRF	0040.0	0050	70.0	2.0	1.0		
[	410	LEAR	8 S	0732.3	0732.8	.8	17			
[	245	LEAR	8 S	0732.3	0732.6	.5	30			
[	606	LEAR	8 S	0732.3	0732.8	.8	22			
	3750	TYKW	5 S	0841.0	0841.2	1.0	8.0	3.0		
[	2000	TYKW	5 S	0848.8	0849.1	2.0	2.5	.8		
[	3750	TYKW	5 S	0848.6	0849.1	2.5	2.5	1.0		
[	9400	TYKW	5 S	0848.8	0849.0	2.0	4.0	1.5		
[	1000	TYKW	5 S	0848.8	0849.1	3.0	1.5	.7		
	3100	CRIM	26 FAL	0923.0	1100.0		5.0			
	930	BORD	41 F	1008.1	1008.5	.5	24.0	2.0		
	2800	OTTA	20 GRF	1125.0	1150	80.0	3.4	1.7		
	930	BORD	41 F	1710.2	1711	2.6	18.0	2.0		
[	9400	TYKW	20 GRF	2340.0U	2400	60.0U	4.0	2.0		INTERFERENCE
[	3750	TYKW	20 GRF	2345.0	2400	50.0	1.5	.7		
20	260	@NDR	44 NS	0600.0E		491.0D	25.0			
[	245	SGMR	43 NS	0911.0	1217.1	529.0D	150			
[	1000	TYKW	20 GRF	0050.0	0120	100.0	1.0	.5		
[	9400	TYKW	20 GRF	0050.0	0125	60.0	3.0	1.5		
[	3750	TYKW	20 GRF	0050.0	0130	100.0	2.0	1.0		
[	2000	TYKW	20 GRF	0050.0	0120	100.0	2.0	1.0		
	2840	PEKG	3 S	0220.2	0225.2	13.8	13.4			
[	3750	TYKW	20 GRF	0449.0	0500	60.0	3.5	1.5		
[	2000	TYKW	20 GRF	0449.0	0500	50.0	3.0	1.5		
[	9400	TYKW	20 GRF	0450.0	0500	50.0	4.0	2.0		
	1000	TYKW	45 C	0450.0	0451.7	3.0	14.0	3.0		
	245	SGMR	4 S/F	1215.0	1217.1	8.0	150			
[	15400	PALE	8 S	1654.0	1654.8	1.1	51			
[	1415	PALE	8 S	1654.5	1654.6	.1	13			
[	2695	PALE	8 S	1654.6	1654.6	.2	26			
[	606	PALE	8 S	1654.6	1654.8	.2	11			
[	606	PALE	8 S	1749.0	1749.1	.1	11			
[	15400	PALE	8 S	1749.6	1750.3	.1	20			
[	2800	OTTA	20 GRF	1915.0	2010	95.0	3.0	1.5		
[	2000	TYKW	20 GRF	2215.0	2219	45.0	1.5	.7		
[	3750	TYKW	21 GRF	2220.0	2233	50.0	1.5	.5		
[	9400	TYKW	5 S	2229.0	2229.7	1.5	12.0	3.0		
[	3750	TYKW	5 S	2229.0	2229.8	2.0	3.0	1.0		
	9400	TYKW	29 PBI	2230.5		40.0	3.0	1.5		
	3750	TYKW	5 S	2252.0	2255.8	10.0	3.0	1.0		
21	260	@NDR	44 NS	0630.0E		452.0D	15.0			
[	208	VORO	44 NS	2100.0E		240.0D		9.0		
[	2695	PENT	20 GRF	0010.0	0110	100.0D	5.0			
[	1000	TYKW	20 GRF	0025.0	0040	35.0	1.5	.5		
[	2000	TYKW	21 GRF	0025.0	0105	130.0	3.0	1.5		
[	9400	TYKW	20 GRF	0030.0	0050	110.0	6.0	3.8		
[	3750	TYKW	21 GRF	0030.0	0105	140.0	6.0	3.0		
	245	LEAR	4 S/F	0200.0	0200.1	3.8	23			
[	2000	TYKW	5 S	0212.0	0212.2	.5	1.5	.5		
[	1000	TYKW	5 S	0212.0	0212.2	.5	2.0	1.0		
	3750	TYKW	5 S	0223.0	0226.8	18.0	5.0	1.5		
	2000	TYKW	5 S	0225.0	0226.3	3.0	1.5	.5		
	204	IZMI	41 F	0759.5	0800.0	1.0	200.0			
	204	IZMI	4 S/F	0813.5	0813.5	.0	300.0D	170.0		
	204	IZMI	8 S	0842.0	0842.0	.3	300.0	170.0		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
21	33	UPIC	4	S/F	1119.0	1119.1	1.3				
	29	UPIC	4	S/F	1119.0	1119.4	1.5				
	245	SGMR	8	S	1306.3	1306.5	.5	32			
	33	UPIC	45	C	1307.0	1307.5	1.5				
	29	UPIC	45	C	1307.5	1307.5	1.8				
	245	SGMR	8	S	1442.8	1443.1	1.3	310			
	33	UPIC	4	S/F	1443.1	1443.1	1.0				
	29	UPIC	8	S	1443.3	1443.4	.2				
	606	SGMR	8	S	1514.3	1515.1	1.5D	150			
	410	SGMR	8	S	1514.8	1515.1	.5D	92			
	245	SGMR	8	S	1514.6	1515.1	1.0	54			
	606	SGMR	8	S	1556.1	1556.6	.9D	180			
	245	SGMR	8	S	1556.1	1556.6	.9	160			
	410	SGMR	8	S	1556.3	1556.6	.5D	58			
	2800	OTTA	240	R	2100.0	2200	60.0	3.0	1.5		
	3750	TYKW	5	S	2120.0	2125	20.0	1.5	.7		
	3750	TYKW	21	GRF	2157.0	2201	120.0	2.0	1.0		
	3750	TYKW	5	S	2305.0	2305.8	3.0	1.5	.5		
22	260	ØNDR	44	NS	0536.0E		514.0D	47.0	2.0		
	245	SGMR	43	NS	0911.0	1200.0	529.0D	73			
	208	VORO	44	NS	2100.0E		240.0D		15.0		
	100	HIRA	43	NS	2110.0	2352	435.0D	110.0	20.0		ML
	200	HIRA	43	NS	2157.0	0048	710.0D	30.0	10.0		ML
	245	LEAR	43	NS	2321.0	0247.0	610.0D	160			
	2695	PENT	240	R	0126.0	0129	3.0	2.8	1.4		
	2000	TYKW	21	GRF	0126.0	0141	30.0	1.5	.7		
	1000	TYKW	21	GRF	0126.0	0240	180.0	1.5	.7		
	3750	TYKW	5	S	0127.0	0130	8.0	1.5	.7		
	3750	TYKW	21	GRF	0127.0	0141	30.0	2.0	1.0		
	2000	TYKW	5	S	0127.0	0130	10.0	1.5	.7		
	3750	TYKW	21	GRF	0127.0	0227	170.0	5.0	2.0		
	9400	TYKW	5	S	0128.0	0131	5.0U	3.0	1.5U		RAIN
	9400	TYKW	5	S	0138.0	0142	15.0	3.0	1.5		
	245	LEAR	8	S	0143.6	0144.0	.7	35			
	245	LEAR	4	S/F	0146.0	0228.6	70.5	60			
	245	PALE	4	S/F	0149.1	0151.8	3.4	20			
	245	PALE	47	GB	0152.5	0209.0	33.0	40			
	2000	TYKW	20	GRF	0159.0	0224	135.0	2.0	1.0		
	1000	TYKW	45	C	0218.8	0219.7	3.0	9.0	1.0		
	9400	TYKW	5	S	0220.0	0221.3	12.0	4.0	1.5		
	1000	TYKW	42	SER	0222.0	0223.8	10.0	2.0	.4		
	245	PALE	4	S/F	0225.5	0228.6	7.5	52			
	9400	TYKW	5	S	0317.0	0317.7	10.0	3.5	1.5		
	3750	TYKW	20	GRF	0615.0	0620	150.0	3.0	1.5		
	245	LEAR	8	S	0806.8	0806.8	.7	35			
	410	LEAR	8	S	0806.8	0806.8	.2	08			
	930	BORD	41	F	0824.5	0824.6	1.9	11.0	2.0		
	29	UPIC	45	C	0852.0		1.7				
	33	UPIC	45	C	0852.2	0852.4	1.5				
	3100	CRIM	20	GRF	1034.0	1100.0	98.0	11.0	4.0		
	430	KRAK	27	RF	1035.0	1046.3	20.7	18.0	5.0		
	2950	GORK	20	GRF	1039.0	1100.0	80.0E	8.0	4.0		
	2800	OTTA	22	GRF	1100.0	1130	130.0D	7.8			
	930	BORD	41	F	1107.0	1107.5	1.0	16.0	2.0		
	930	BORD	41	F	1150.4	1150.4	.2	77.0	2.0		
	2800	OTTA	21	GRF	1425.0	1510	235.0	30.0			
	7000	SAOP	47	GB	1440.0	1458.9	31.0	527.0	336.0		12R
	8400	BERN	47	GB	1445.7	1458.8	180.0	557.0			
	11800	BERN	46	C	1445.7	1458.8	120.0	418.0			
	5200	BERN	47	GB	1445.7	1458.9	180.0	547.0			
	3200	BERN	46	C	1445.7	1501.0	180.0	409.0			
	2800	OTTA	46F	C	1447.0	1501	43.0	290.0	106.0		
	1415	ATHN	4	S/F	1447.5	1501.5	40.0D	83			
	4995	ATHN	4	S/F	1447.5E	1458.0	40.0	910			
	2695	ATHN	4	S/F	1447.5	1501.3	41.0D	330			
	228	HARS	27	RF	1452.5	1507 U	52.0	70.0	25.0		
	19600	BERN	46	C	1456.3	1459.0	120.0	154.0			
	7000	SAOP	29	PBI	1511.0	1511.0	96.0	171.0	85.0		
	2650	DWIN	47	GB	1522.0	1532	45.0	290.0	150.0		
	410	SGMR	4	S/F	1529.5	1532.0	9.8	40			
	606	SGMR	4	S/F	1530.3	1534.3	9.0D	25			
	245	PALE	8	S	1914.1	1914.3	.7	40			
	2800	OTTA	1	S	1926.0	1927.5	3.0	2.4	1.0		
	245	PALE	8	S	2032.8	2033.1	.3	50			
	8800	PALE	4	S/F	2054.8	2055.6	5.0	240			
	4995	PALE	4	S/F	2055.0	2055.6	4.0	38			
	9400	TYKW	5	S	2055.0U	2055.6	5.0U	100.0U	20.0U		
	15400	PALE	4	S/F	2055.1	2055.6	9.2	139			
	2800	OTTA	20	GRF	2205.0	2212	50.0	3.8	1.8		
	2000	TYKW	20	GRF	2209.0	2211.7	140.0	2.5	1.0		
	3750	TYKW	5	S	2209.0	2211.7	3.0	6.0	3.0		
	3750	TYKW	29	PBI	2212.0		40.0	4.0	2.0		
	2695	PENT	20	GRF	2305.0	2342	110.0	4.0	1.6		
	3750	TYKW	20	GRF	2310.0	2343	110.0	3.0	1.0		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
					UT	UT	MINUTES	PEAK	MEAN		
23	260	ØNDR	44	NS	Ø528.ØE		521.ØD	81.Ø	5.Ø		
	204	IZMI	43	NS	Ø6ØØ.Ø		36ØØ.ØD	4Ø.Ø			
	127	TORN	44	NS	Ø63Ø.ØE	1119.3	57Ø.ØD	15Ø.Ø	11.Ø		V1
	245	SGMR	43	NS	1536.Ø	16Ø3.8	164.ØD	62			
	1ØØ	HIRA	44	NS	1922.ØE	Ø823	81Ø.ØD	3ØØØ.Ø	26Ø.Ø		SL
	2ØØ	HIRA	44	NS	1922.ØE	Ø758	81Ø.ØD	12Ø.Ø	7Ø.Ø		ML
	2Ø8	VORO	44	NS	21ØØ.ØE		24Ø.ØD		39.Ø		
	245	PALE	43	NS	2128.Ø	Ø1Ø2.5	427.ØD	119			
	245	LEAR	43	NS	2321.Ø	Ø8Ø2.3	61Ø.ØD	13Ø			
	1ØØØ	TYKW	42	SER	Ø142.Ø	Ø145.5	5.Ø	5.Ø	.3		
	2ØØØ	TYKW	45	C	Ø148.Ø	Ø148.6	1.Ø	8.Ø	2.5		
	1ØØØ	TYKW	5	S	Ø148.Ø	Ø148.6	1.Ø	2.5	.7		
	3750	TYKW	21	GRF	Ø156.6	Ø237	13Ø.Ø	4.Ø	1.5		
	2ØØØ	TYKW	21	GRF	Ø2Ø9.Ø	Ø25Ø	13Ø.Ø	3.Ø	1.5		
	94ØØ	TYKW	5	S	Ø212.Ø	Ø213	7.Ø	3.Ø	1.5		
	3750	TYKW	5	S	Ø212.Ø	Ø213	7.Ø	3.Ø	1.Ø		
	2ØØØ	TYKW	5	S	Ø212.Ø	Ø213	2.Ø	1.5	.5		
	94ØØ	TYKW	2Ø	GRF	Ø223.Ø	Ø325	1Ø5.Ø	3.Ø	1.5		
	3750	TYKW	21	GRF	Ø535.Ø	Ø64Ø	13Ø.Ø	8.Ø	3.5		
	2ØØØ	TYKW	21	GRF	Ø54Ø.Ø	Ø64Ø	11Ø.Ø	3.Ø	1.5		
	94ØØ	TYKW	21	GRF	Ø55Ø.Ø	Ø64Ø	1ØØ.Ø	3.Ø	1.5		
	31ØØ	CRIM	21	GRF	Ø61Ø.Ø	Ø629.Ø	61.Ø	3.Ø	1.Ø		
	3750	TYKW	5	S	Ø618.Ø	Ø619.2	3.Ø	2.Ø	.7		
	2ØØØ	TYKW	5	S	Ø618.2	Ø619.1	.7	5.Ø	1.5		
	2840	PEKG	5	S	Ø63Ø.Ø	Ø634	35.Ø	75.Ø	25.Ø		
	245	LEAR	8	S	Ø633.6	Ø634.6	1.5	Ø9			
	536	ØNDR	2	S/F	Ø633.8	Ø634.6	1.5	1Ø.Ø	.3		
	2695	ATHN	4	S/F	Ø634.Ø	Ø634.6	5.ØD	82			
	61ØØ	KISV	8	S	Ø634.Ø	Ø635	2.Ø	24.Ø			
	1415	ATHN	4	S/F	Ø634.Ø	Ø634.6	4.5D	11			
	31ØØ	CRIM	1	S	Ø634.Ø	Ø634.7	1.Ø	63.Ø	21.Ø		
	91ØØ	GORK	1	S	Ø634.Ø	Ø634.6	1.6	14.Ø	7.Ø		
	41Ø	LEAR	4	S/F	Ø634.Ø	Ø634.8	2.1	2Ø			
	6Ø6	LEAR	8	S	Ø634.Ø	Ø634.8	1.1	42			
	8Ø8	ØNDR	2	S/F	Ø634.Ø	Ø634.8	1.5	12.Ø	3.Ø		
	1ØØØ	TYKW	45	C	Ø634.Ø	Ø634.7	2.Ø	2Ø.Ø	2.5		
	94ØØ	TYKW	5	S	Ø634.Ø	Ø634.7	2.5	1Ø.Ø	2.Ø		
	3750	TYKW	45	C	Ø634.Ø	Ø634.7	4.Ø	48.Ø	5.Ø		
	2ØØØ	TYKW	45	C	Ø634.Ø	Ø634.7	3.Ø	49.Ø	3.5		
	8800	LEAR	8	S	Ø634.1	Ø634.8	.7	2Ø			
	2695	LEAR	8	S	Ø634.1	Ø634.6	.9	1ØØ			
	95Ø	GORK	2	S/F	Ø634.2	Ø634.8	.9	18.Ø	9.Ø		
	2958	GORK	3	S	Ø634.2	Ø634.7	1.Ø	72.Ø	36.Ø		
	65Ø	GORK	3	S	Ø634.3	Ø635.1	1.3	11.Ø	5.Ø		
	4995	LEAR	8	S	Ø634.3	Ø634.6	.5	28			
	4995	LEAR	8	S	Ø634.3	Ø634.6	.7	28			
	1415	LEAR	8	S	Ø634.5	Ø634.6	.1	15			
	4995	ATHN	4	S/F	Ø634.6	Ø635.5	Ø.9D	17			
	4995	MANI	3	S	Ø635.6	Ø636.8	1.4	43.6	14.5		
	1415	MANI	3	S	Ø636.Ø	Ø637.Ø	1.2	1Ø.Ø	3.3		
	6Ø6	MANI	3	S	Ø636.Ø	Ø636.9	1.1	15.6	5.2		
	2695	MANI	3	S	Ø636.2	Ø637.Ø	1.Ø	93.Ø	31.Ø		
	61ØØ	KISV	4	S/F	Ø658.Ø	Ø659.5	6.Ø	24.Ø			
	9395	PEKG	5	S	Ø658.Ø	Ø658.3	2.Ø	42.Ø	15.Ø		
	91ØØ	GORK	3	S	Ø658.8	Ø659.2	1.2	6Ø.Ø			
	4995	ATHN	4	S/F	Ø658.8	Ø659.1	5.8	31			
	2958	GORK	1	S	Ø658.8	Ø659.2	3.Ø	1Ø.Ø	5.Ø		
	31ØØ	CRIM	1	S	Ø658.9	Ø659.2	3.Ø	11.Ø	4.Ø		
	15400	LEAR	8	S	Ø659.Ø	Ø659.1	1.8	2Ø			
	4995	LEAR	8	S	Ø659.Ø	Ø659.1	.8	34			
	8800	LEAR	8	S	Ø659.Ø	Ø659.1	.6	48			
	3750	TYKW	45	C	Ø659.Ø	Ø659.3	4.Ø	2Ø.Ø	6.Ø		
	94ØØ	TYKW	45	C	Ø659.Ø	Ø659.3	4.Ø	43.Ø	9.Ø		
	2840	PEKG	1	S	Ø659.Ø	Ø659	2.4	9.Ø	6.Ø		
	91ØØ	GORK	29	PBI	Ø659.9	Ø7ØØ.Ø	18.Ø	2Ø.Ø			
	9395	PEKG	29	PBI	Ø7ØØ.Ø		12.Ø	5.Ø	4.Ø		
	4995	MANI	3	S	Ø7ØØ.6	Ø7Ø1.3	2.2	39.6	13.2		
	8800	MANI	3	S	Ø7Ø1.Ø	Ø7Ø1.3	2.Ø	63.8	21.3		
	33	UPIC	42	SER	Ø84Ø.6		228.2				
	29	UPIC	42	SER	Ø84Ø.7		228.4				
	204	IZMI	41	F	Ø85Ø.8	Ø852.5	5.Ø	13Ø.Ø			
	9395	PEKG	3	S	Ø855.Ø	Ø9Ø5	2Ø.Ø	17.Ø	5.2		
	65Ø	GORK	1	S	Ø856.Ø	Ø856.4	.8	2.Ø	1.Ø		
	61ØØ	KISV	46	C	Ø9Ø3.Ø	Ø9Ø7.7	9.Ø	9.Ø			
	91ØØ	GORK	1	S	Ø9Ø3.1	Ø9Ø5.1	4.8	2Ø.Ø	1Ø.Ø		
	2958	GORK	1	S	Ø9Ø4.1	Ø9Ø4.6	1.Ø	2.Ø	1.Ø		
	65Ø	GORK	1	S	Ø9Ø4.5	Ø9Ø5.Ø	.9	2.Ø	1.Ø		
	4995	ATHN	8	S	1ØØ2.1	1ØØ9.Ø	6.9D	119			
	2695	ATHN	4	S/F	1ØØ2.3	1ØØ9.1	81.7D	51			
	3200	BERN	46	C	1Ø51.Ø	1107.6	8Ø.Ø	95.Ø			
	5200	BERN	46	C	1Ø51.Ø	1107.6	8Ø.Ø	151.Ø			
	11800	BERN	46	C	1Ø51.2	1108.8	8Ø.ØU	137.Ø			
	19600	BERN	46	C	1Ø51.6	1109.Ø	6Ø.ØU	59.Ø			
	8400	BERN	46	C	1Ø52.Ø	1108.9	8Ø.Ø	183.Ø			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
23	6100	KISV			1052.0	1103.3		21.0			
	6100	KISV	45	C	1052.0	1108	21.0	120.0			
	8800	SGMR	4	S/F	1052.0	1054.0	4.0	37			
	6100	KISV			1052.0	1109		111.0			
	6100	KISV			1052.0	1103.8		32.0			
	4995	SGMR	4	S/F	1052.0	1054.0	4.3D	30			
	6100	KISV			1052.0	1054		22.0			
	3100	CRIM	1	S	1052.5	1053.8	3.0	6.0	2.0		
	4995	ATHN	4	S/F	1052.5	1053.6	3.5	31			
	9100	GORK	22	GRF	1052.6	1109.8	25.4	140.0			
	2950	GORK	21	GRF	1052.8	1103.7	67.0E	19.0			
	2695	SGMR	8	S	1053.0	1053.8	1.8D	05			
	2800	OTTA	1	S	1053.0	1054	2.0	4.8	2.4		
	3100	CRIM	45	C	1101.0	1107.2	10.0	69.0	23.0		
	3100	CRIM			1101.0	1108.8		68.0			
	2695	SGMR		S/F	1101.8	1107.5	14.7D	60			
	2650	DWIN	2	S/F	1102.6		10.0	50.0	30.0		
	2800	OTTA	46F	C	1102.0	1107.5	10.0	65.0	35.0		
	1415	SGMR	4	S/F	1102.3	1107.6	17.3D	08			
	4995	SGMR	4	S/F	1102.3	1107.6	17.0D	110			
	8800	SGMR	4	S/F	1102.3	1109.0	21.3D	150			
	15400	SGMR	4	S/F	1102.6	1109.0	17.2	130			
	204	IZMI	4	S/F	1105.0	1107.5	7.0	46.0	28.0		
	2950	GORK			1105.1	1109.0		46.0			
	2950	GORK	45	C	1105.1	1107.7	6.5	50.0			
	3100	CRIM	29	PBI	1111.0	1111.0	49.0	16.0	5.0		
	2800	OTTA	29	PBI	1112.0	1112	48.0	18.2	8.6		
	7000	SAOP	28	PRE	1208.0		2.0	7.0	3.0		
	6100	KISV	45	C	1210.0	1211.3	20.0	52.0			
	2650	DWIN	1	S	1210.0	1211	2.0	30.0	20.0		
	7000	SAOP	4	S/F	1210.5	1211.9	2.0	84.0	42.0		16R
	3200	BERN	46	C	1210.6	1211.9	50.0	40.0			
	5200	BERN	46	C	1210.6	1211.9	50.0	73.0			
	2695	ATHN	4	S/F	1210.6	1212.0	2.4D	25			
	4995	ATHN	4	S/F	1210.6	1212.0	3.7	54			
	8400	BERN	46	C	1210.6	1211.9	50.0	100.0			
	8800	SGMR	4	S/F	1210.6	1212.0	9.5D	85			
	11800	BERN	46	C	1210.7	1211.9	50.0	66.0			
	4995	SGMR	4	S/F	1210.8	1212.0	7.2D	56			
	2695	SGMR	4	S/F	1210.8	1211.8	6.2D	31			
	15400	SGMR	4	S/F	1211.0	1211.8	5.1	18			
	3100	CRIM	1	S	1211.0	1211.8	2.0	28.0	9.0		
	2800	OTTA	3	S	1211.0	1212	3.5	27.4	6.8		
	1415	SGMR	4	S/F	1211.1	1212.1	5.2D	20			
	1415	ATHN	8	S	1211.5	1212.0	1.5D	15			
	7000	SAOP	29	PBI	1212.0	1224.0	33.0	43.0	20.0		
	2800	OTTA	46F	C	1219.0	1224.2	7.0	31.0	15.5		
	2650	DWIN	1	S/F	1220.0	1224	5.0	20.0	10.0		
	8800	SGMR	4	S/F	1220.1	1224.1	10.7	23			
	2695	SGMR	4	S/F	1220.1	1224.1	10.7D	24			
	4995	SGMR	4	S/F	1220.1	1224.1	10.5D	30			
	2695	ATHN	4	S/F	1220.6	1224.3	7.5D	17			
	4995	ATHN	4	S/F	1220.6	1224.1	9.0	31			
	1415	ATHN	4	S/F	1221.8	1222.5	3.0D	13			
	1415	SGMR	4	S/F	1222.0	1222.1	3.1D	09			
	6100	KISV		C	1223.5			26.0			
	2800	OTTA	29	PBI	1226.0	1226	35.0	11.8	3.9		
	2800	OTTA	20	GRF	1415.0	1445	65.0	3.2	1.6		
	2800	OTTA	23	GRF	1600.0	1932	340.0	20.6			
	19600	BERN	46	C	1706.0	1732.8	40.0D	370.0U			
	5200	BERN	47	GB	1706.0	1732.4	70.0D	1910.0			
	8400	BERN	47	GB	1706.0	1732.6	45.0D	1640.0U			
	11800	BERN	47	GB	1706.0	1732.8	45.0D	1120.0U			
	3200	BERN	47	GB	1706.0	1733.1	70.0D	1620.0			
	7000	SAOP	47	GB	1706.0	1732.8	109.2	1927.0	960.0		21R
	2695	SGMR	47	GB	1709.8	1712.6	62.5D	119			
	8800	SGMR	47	GB	1710.0	1718.5	63.0D	100			
	1415	SGMR	47	GB	1710.0	1719.6	58.0D	90			
	2800	OTTA	47	GB	1710.0	1733.4	60.0	1600.0	316.0		
	4995	SGMR	47	GB	1710.5	1718.8	61.1D	110			
	1415	ATHN	4	S/F	1710.6	1732.6	30.5D	240			
	606	SGMR	47	GB	1711.0	1718.5	48.0D	05			
	2650	DWIN	49	GB	1712.0		45.0	500.0D			
	410	SGMR	47	GB	1712.6	1717.8	45.4D	119			
	15400	SGMR	47	GB	1713.5	1718.5	58.1D	37			
	245	SGMR	47	GB	1713.8	1718.3	47.3D	110			
	228	HARS	27	RF	1714.0	1730 U	90.0	100.0	25.0		
	4995	ATHN	47	GB	1714.6E	1732.5	26.7	1600			
	2695	ATHN	47	GB	1714.8	1732.5	26.5D	1600			
	606	PALE	49	GB	1731.8	1734.1	12.8	220			
	2695	PALE	49	GB	1731.8	1733.3	18.2	2600			
	245	PALE	49	GB	1731.8	1735.0	15.3	80000			
	4995	PALE	49	GB	1731.8	1733.0	18.2	2000			
	15400	PALE	49	GB	1731.8	1733.0	18.2	820			
	8800	PALE	49	GB	1731.8	1733.0	18.2	1700			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
				UT	UT	MINUTES	PEAK	MEAN		
23	1415	PALE	49 GB	1731.8	1735.0	18.2	600			
	410	PALE	49 GB	1731.8	1734.5	18.2	00			
	7000	SAOP	3 S	1856.7	1858.1	2.6	24.0	12.0		26R
	7000	SAOP	F	1856.7						3
	7000	SAOP	3 S	1902.3	1902.9	1.7	10.0	5.0		0
	7000	SAOP	3 S	1907.0	1910.9	5.3	30.0	15.0		0
	2695	PENT	2 S/F	1908.0	1911	4.5	9.0	3.0		
	7000	SAOP	29 PBI	1912.3	1913.7	4.6	13.0	5.0		
	2695	PENT	1 S	1917.0	1917.8	2.7	2.8	2.1		
	2695	PENT	1 S	1932.3	1932.6	1.2	6.6	3.3		
	2800	OTTA	20 GRF	2158.0	2201	12.0	3.0	1.5		
	3750	TYKW	5 S	2159.0	2200.0	12.0	6.0	1.5		
	3750	TYKW	21 GRF	2235.0	2300	60.0	7.0	3.5		
	2800	TYKW	21 GRF	2236.0	2300	60.0	1.5U	.7U		
	9400	TYKW	20 GRF	2236.0	2300	60.0	8.0	4.0U		INTERFERENCE
	3750	TYKW	5 S	2236.0	2238.5	15.0	11.0	3.5U		
	2800	OTTA	240 R	2237.0	2238	1.0	3.0	1.0		
	2800	OTTA	1 S	2238.3	2239	1.0	2.0	1.6		
	2000	TYKW	10 S	2238.7	2239.0	.5	3.0	1.0		
	2695	PENT	0 S	2323.5	2323.5	.1	4.8			
	9400	TYKW	20 GRF	2350.0	0043	80.0	9.0	3.5		
	9400	TYKW	21 GRF	2350.0	0034	85.0	7.0	3.5		
	2000	TYKW	21 GRF	2358.0	0035	70.0	3.0	1.5		
24	260	ØNDR	44 NS	0540.0E		510.0D	192.0D	16.0		
	29	UPIC	43 NS	0546.0		706.3				
	33	UPIC	43 NS	0546.0		707.5				
	204	IZMI	44 NS	0600.0E		3600.0D	60.0			
	127	TORN	44 NS	0820.0E	0853.0	460.0D	2100.0	106.0		V0
	245	SGMR	43 NS	0912.0	1036.1	82.1D	150			
	100	HIRA	44 NS	1916.0E	0700	810.0D	1300.0	550.0		ML
	200	HIRA	44 NS	1916.0E	0600	810.0D	190.0	120.0		SL
	208	VORO	44 NS	2100.0E		240.0D		86.0		
	245	LEAR	43 NS	2321.0	0428.1	610.0D	100			
	2695	PENT	21 GRF	0000.0	0045	70.0	7.4	3.7		
	3750	TYKW	45 C	0036.0	0043	30.0	9.0	4.0		
	2000	TYKW	5 S	0036.3	0036.8	1.0	34.0	7.0		
	1000	TYKW	5 S	0036.6	0036.8	.6	4.0	1.5		
	2695	PENT	3 S	0036.6	0037	1.0	42.0	20.0		
	2695	LEAR	8 S	0036.6	0036.8	.2	38			
	1415	LEAR	4 S/F	0036.8	0036.8	166.4	13			
	2695	PENT	2 S/F	0042.0	0043	4.0	6.0	3.0		
	2000	TYKW	45 C	0042.0	0042.9	10.0	8.0	1.5		
	1000	TYKW	45 C	0042.5	0045.4	3.5	8.0	1.5		
	1415	LEAR	8 S	0044.3	0044.6	.5	25			
	245	SGMR	47 GB	0070.0	1022.1	552.1D	10010			
	1000	TYKW	5 S	0117.7	0118.0	1.0	3.0	1.0		
	3750	TYKW	5 S	0117.7	0118.2	1.5	2.5	1.0		
	2000	TYKW	21 GRF	0133.0	0300	170.0	5.0	1.3		
	3750	TYKW	21 GRF	0133.0	0300	170.0	7.0	3.0		
	3750	TYKW	5 S	0134.0	0137	8.0	1.5	.7		
	2840	PEKG	3 S	0140.0	0200	31.0	16.0	5.0		
	1000	TYKW	21 GRF	0140.0	0300	160.0	1.5	.7		
	9400	TYKW	5 S	0154.0	0200	10.0	7.0	2.0		
	2000	TYKW	45 C	0155.0	0156.1	8.0	10.0	2.5		
	3750	TYKW	5 S	0155.0	0200.1	10.0	22.0	5.0		
	9395	PEKG	5 S	0155.0	0200	9.0	10.0	4.0		
	1000	TYKW	45 C	0155.0	0159.7	8.0	24.0	3.0		
	2695	MANI	2 S/F	0155.2	0200.3	7.8	8.8	2.9		
	1415	MANI	4 S/F	0155.5	0159.8	8.5	19.9	6.6		
	606	MANI	4 S/F	0156.0	0200.0	6.0	52.5	17.5		
	4995	MANI	4 S/F	0157.0	0200.3	5.5	25.1	8.4		
	500	HIRA	46 C	0157.3	0159.5	3.6	300.0	50.0		WL
	4995	LEAR	4 S/F	0158.6	0200.0	2.5	24			
	8800	LEAR	4 S/F	0158.8	0200.0	2.3	15			
	2695	LEAR	8 S	0159.1	0200.0	2.0	13			
	1415	LEAR	8 S	0159.5	0159.6	1.6	24			
	2000	TYKW	8 S	0240.0	0240.1	.3	16.0	5.0		
	2000	TYKW	5 S	0300.5	0300.7	.5	4.0	1.5		
	2000	TYKW	8 S	0323.7	0323.8	.3	8.0	2.0		
	2000	TYKW	5 S	0332.5	0333	1.5	1.5	.5		
	3750	TYKW	20 GRF	0350.0	0409	31.0	2.5	1.0		
	2000	TYKW	8 S	0420.2	0420.3	.3	7.0	2.5		
	3750	TYKW	5 S	0440.6	0441.1	3.0	8.0	2.0		
	9400	TYKW	5 S	0440.0	0441	3.0	4.0	1.5		
	2950	GORK	1 S	0440.8	0441.2	1.5	5.0	2.5		
	6100	KISV	45 C	0545.0	0546	13.0	3.0			
	6100	KISV	45 C	0545.0	0551		4.0			
	9100	GORK	23 GRF	0545.2	0639.7	193.0	26.0			
	2950	GORK	1 S	0546.0	0546.4	1.4	3.5	1.7		
	2000	TYKW	5 S	0546.0	0546.6	2.0	2.0	1.0		
	3750	TYKW	28 PRE	0546.0	0546.3	44.0	6.0	2.5		
	9400	TYKW	28 PRE	0546.0	0552.3	44.0	12.0	3.5		
	1000	TYKW	45 C	0546.0	0546.3	1.5	7.0	2.0		
	2950	GORK	1 S	0551.0	0551.7	2.0	3.0	1.5		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
24	9395	PEKG	47	GB	0621.0	0631	14.0	678.0			
	2840	PEKG	5	S	0621.0	0631.3	06.31	483.0			
	1415	MANI	4	S/F	0628.0	0631.0	8.0	487.6	162.5		
	6100	KISV	8	S	0629.0	0631.4	3.5	361.0			
	8800	MANI	47	GB	0629.5	0630.8	6.0	633.7	211.2		
	3200	BERN	47	GB	0629.5	0631.1	60.0	2603.0			
	808	ØNDR	46	C	0629.5		28.0	102.0D	20.0		
	2000	TYKW	45	C	0629.5	0630.9	5.5	395.0	100.0		
	5200	BERN	47	GB	0629.6	0631.1	60.0	3319.0			
	4995	MANI	3	S	0629.7	0631.0	5.8	489.4	163.2		
	8400	BERN	47	GB	0629.7	0630.8	60.0	1083.0			
	2950	GORK	21		0629.7		36.3				
	2695	MANI	3	S	0629.7	0631.1	4.8	463.2	154.4		
	606	MANI	4	S/F	0629.7	0630.9	10.8	233.1	77.7		
	500	HIRA	41	F	0629.7	0630.4	30.0	400.0			WL
	200	HIRA	46	C	0629.8	0630.5	4.0	16000.0	880.0		WL
	11800	BERN	47	GB	0629.8	0630.8	60.0	1100.0			
	4995	LEAR	47	GB	0629.8	0631.1	5.5	550			
	650	GORK	46	C	0629.9	0632.3	27.3	185.0			
	650	GORK			0629.9	0639.7		35.0			
	650	GORK			0629.9	0651.0		25.0			
	950	GORK	45	C	0629.9	0631.3	4.4	4.4	260.0		
	204	IZMI	45	C	0630.0	0631.0	2.0	1550.0	550.0		
	1415	LEAR	47	GB	0630.0	0630.6	4.8	540			
	8800	LEAR	47	GB	0630.0	0630.8	5.3	990			
	2650	DWIN	2	S/F	0630.0	0632	7.0	410.0	150.0		
	9100	GORK	4	S	0630.0	0630.9	4.7	840.0			
	2695	LEAR	4	S/F	0630.0	0631.1	4.8	460			
	245	LEAR	4	S/F	0630.0	0630.8	3.0	290			
	2950	GORK	3	S	0630.0	0631.0	1.7	170.0E			
	204	IZMI	5	S	0630.0	0631.0	4.0	460.0	340.0		
	536	ØNDR	46	C	0630.0	0630.8	30.0	124.0	25.0		
	9400	TYKW	47	GB	0630.0	0631.0	5.0	920.0	140.0		
	3750	TYKW	47	GB	0630.0	0631.2	6.0	500.0	110.0		
	1000	TYKW	45	C	0630.0	0631.3	8.0	305.0	70.0		
	100	HIRA	48	C	0630.3		1.6	80000.0D	5000.0D		
	35000	BERN	4	S/F	0630.3	0630.8	36.0	160.0			
	15400	LEAR	47	GB	0630.3	0630.8	8.7	630			
	127	TORN	47	GB	0630.3		3.8	1600.0			DISTURBED
	19600	BERN	4	S/F	0630.3	0630.8	36.0	469.0			
	17000	NOBE	45	C	0630.4	0635.1	4.7	564.0			R
	15000	KISV	8	S	0630.5	0631.5	5.0	49.0			
	6100	KISV	29	PBI	0632.5		47.0	53.0			
	950	GORK	30	PBI	0634.3	0634.3	19.3	18.0			
	9395	PEKG	29	PBI	0635.0		35.0	18.0	12.0		
	9400	TYKW	29	PBI	0635.0		90.0	28.0	10.0		
	2000	TYKW	30	PBI	0635.0		90.0	9.0	2.0		
	3750	TYKW	30	PBI	0636.0		90.0	12.0	5.0		
	1000	TYKW	30	PBI	0638.0		70.0	5.0	2.0		
	3750	TYKW		S	0639.6	0648.5	7.0	6.0	2.0		
	2950	GORK	1	S	0639.0	0639.7	1.0	5.0	2.5		
	950	GORK	3	S	0639.3	0639.7	1.0	21.0	10.0		
	1000	TYKW	5	S	0639.4	0639.7	1.0	19.0	7.0		
	2000	TYKW	45	C	0645.0	0651.3	15.0	171.0	15.0		
	1000	TYKW	45	C	0645.0	0651.0	13.0	19.0	4.0		
	3750	TYKW	45	C	0647.0	0651.0	15.0	8.0	2.0		
	950	GORK	2	S/F	0649.9	0650.9	3.7	21.0			
	2650	DWIN	2	S/F	0650.0	0651	5.0	50.0	25.0		
	2840	PEKG	5	S	0650.0	0651.4	4.0	22.0	6.2		
	2950	GORK	1	S	0650.4	0651.2	1.8	13.0			
	650	GORK	29	PBI	0657.2	0711.0	126.0	4.0	2.0		
	1000	TYKW	42	SER	0658.0	0711.9	20.0	9.0	1.0		
	430	KRAK	2	S/F	0709.0	0710.6	3.3	13.0	4.0		
	2000	TYKW	5	S	0710.5	0711.3	1.5	4.5	1.5		
	2000	TYKW	5	S	0717.0	0717.5	1.5	3.0	.8		
	430	KRAK			0719.2	0722.2		50.0			
	430	KRAK		C	0719.2	0721.6	4.0	100.0	15.0		
	245	LEAR	47	GB	0721.5	0721.8	.5	790			
	2000	TYKW	45	C	0722.3	0722.6	1.0	13.0	3.5		
	1415	LEAR	8	S	0722.5	0722.6	.1	56			
	2000	TYKW	5	S	0728.0	0728.3	.7	6.0	2.0		
	1415	LEAR	8	S	0728.1	0728.3	.5	27			
	2650	DWIN	45	C	0731.0	0733	12.0	250.0	100.0		
	430	KRAK	42	SER	0734.8	0735.8	13.6	100.0			
	430	KRAK			0734.8	0744.9		120.0			
	4995	LEAR	8	S	0736.0	0736.5	.8	11			
	2695	LEAR	8	S	0736.1	0736.5	.7	09			
	1415	LEAR	8	S	0736.1	0736.5	.7	48			
	8800	LEAR	8	S	0736.3	0736.5	.5	19			
	810	KRAK	8	S	0736.3	0736.5	.4	5.0			
	1000	TYKW	45	C	0736.3	0736.6	.5	13.0	3.5		
	2000	TYKW	8	S	0736.3	0736.5	.4	12.0	3.0		
	810	KRAK	8	S	0744.9	0745.1	.8	20.0			
	536	ØNDR	42	SER	0745.0	0745.7	50.0	31.0			
	1000	TYKW	45	C	0745.0	0745.5	1.0	41.0	9.0		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
24	808	ØNDR	2	S/F	Ø745.Ø	Ø745.6	1.Ø	28.Ø	3.Ø		
	2ØØØ	TYKW	42	SER	Ø755.5	Ø756.6	4.Ø	16.Ø	1.Ø		
	3750	TYKW	21	GRF	Ø81Ø.Ø	Ø835	7Ø.Ø	5.Ø	2.5		
	3750	TYKW	5	S	Ø811.Ø	Ø812.1	2.Ø	4.Ø	1.Ø		
	2650	DWIN	1	S/F	Ø811.Ø	Ø811.5	1.Ø	2Ø.Ø	1Ø.Ø		
	6100	KISV	1	S	Ø811.Ø	Ø812.3	2.Ø	3.Ø			
	245	LEAR	4	S/F	Ø811.3	Ø812.Ø	263.8	73			
	2950	GORK	1	S	Ø811.4	Ø812.Ø	1.3	6.Ø	3.Ø		
	2ØØØ	TYKW	45	C	Ø811.5	Ø812.1	2.5	28.Ø	4.Ø		
	1ØØØ	TYKW	45	C	Ø811.5	Ø812.1	1.5	7.Ø	1.5		
	430	KRAK	42	SER	Ø811.6	Ø812.3	33.2	11.Ø			
	430	KRAK			Ø811.6	Ø832.Ø		6Ø.Ø			
	430	KRAK			Ø811.6	Ø843.4		6Ø.Ø			
	1415	LEAR	47	GB	Ø811.6	Ø812.1	.5	1399			
	91Ø	KRAK	8	S	Ø814.8	Ø814.8	.2	13.Ø			
	2ØØØ	TYKW	21	GRF	Ø825.Ø	Ø84Ø	4Ø.Ø	3.Ø	1.5		
	2ØØØ	TYKW	8	S	Ø827.9	Ø828.Ø	.2	6.Ø	2.Ø		
	2ØØØ	TYKW	45	C	Ø831.8	Ø832.Ø	.3	7.Ø	2.Ø		
	1415	LEAR	47	GB	Ø831.8	Ø832.Ø	.5	84Ø			
	245	LEAR	4	S/F	Ø831.8	Ø835.6	5.Ø	13Ø			
	81Ø	KRAK	8	S	Ø834.2	Ø834.2	.2	16.Ø			
	9100	GORK	1	S	Ø835.5	Ø836.Ø	.7	1Ø.Ø	5.Ø		
	6100	KISV	1	S	Ø835.5	Ø836.1	1.5	4.Ø			
	2ØØØ	TYKW	45	C	Ø853.4	Ø853.7	.5	195.Ø	25.Ø		
	1415	LEAR	8	S	Ø853.5	Ø853.6	.3	21Ø			
	6100	KISV	1	S	Ø853.5	Ø854	1.Ø	4.Ø			
	9100	GORK	1	S	Ø853.5	Ø853.7	.9	17.Ø	8.Ø		
	9100	GORK	1	S	Ø925.Ø	Ø925.5	2.3	6.Ø	3.Ø		
	430	KRAK	8	S	Ø954.4	Ø954.5	.6	78.Ø			
	810	KRAK	8	S	Ø954.5	Ø954.5	.4	15.Ø			
	536	ØNDR	42	SER	1ØØ5.5	1Ø19.2	36.Ø	15.Ø			
	430	KRAK			1Ø11.1	1Ø13.4		47.Ø			
	430	KRAK			1Ø11.1	1Ø19.5		33.Ø			
	430	KRAK	42	SER	1Ø11.1	1Ø12.1	14.2	16Ø.Ø			
	1415	SGMR	8	S	1Ø18.Ø	1Ø19.1	1.Ø	31			
	606	SGMR	8	S	1Ø19.Ø	1Ø19.1Ø	.1D	13.Ø			
	245	SGMR	8	S	1Ø19.Ø	1Ø19.3	.8D	16Ø			
	410	SGMR	4	S/F	1Ø19.1	1Ø19.1	54Ø.2D	17			
	810	KRAK	40	F	1Ø39.Ø	1Ø39.3	3.Ø	16Ø.Ø			
	606	SGMR	4	S/F	1Ø39.Ø	1Ø39.Ø	3.Ø	34			
	2800	OTTA	21	GRF	1105.Ø	1135	55.Ø	5.8	2.9		
	7000	SAOP	45	C	1112.Ø	1122.8	13.Ø	27.Ø	13.Ø		14L
	6100	KISV	45	S	1112.Ø	1123	15.Ø	24.Ø			
	6100	KISV			1112.Ø	1117		1Ø.Ø			
	6100	KISV			1112.Ø	1115		8.Ø			
	9100	GORK	22	GRF	1112.5	1122.7	46.4	25.Ø			
	8800	SGMR	4	S/F	1112.6	1122.6	13.5	3Ø			
	7000	SAOP	29	PBI	1125.Ø	1125.Ø	44.Ø	17.Ø	8.Ø		
	1415	SGMR	8	S	1130.1	1130.6	1.7	68			
	245	SGMR	4	S/F	1141.1	1142.Ø	2.9D	38Ø			
	1415	SGMR	4	S/F	1141.1	1143.3	3.Ø	18			
	2800	OTTA	1	S	1142.Ø	1142.8	2.Ø	3.Ø	1.5		
	606	SGMR	8	S	1143.6	1143.1	.8D	97			
	7000	SAOP	28	PRE	1305.Ø	1320.3	15.3	1Ø.Ø	5.Ø		
	2800	OTTA	240	R	1305.Ø	1318	13.Ø	3.Ø			
	6100	KISV	45	C	1318.Ø	1322.5	8.Ø	28.Ø			
	6100	KISV			1318.Ø	1319		27.Ø			
	5200	BERN	46	C	1319.1	1320.8	45.Ø	398.Ø			
	3200	BERN	46	C	1319.2	1320.9	45.Ø	419.Ø			
	11800	BERN	46	C	1319.3	1321.5	45.Ø	33.Ø			
	245	SGMR	47	GB	1319.Ø	1320.3	4.7D	32Ø			
	2695	SGMR	4	S/F	1320.Ø	1320.8	1Ø.6D	7Ø			
	8400	BERN	46	C	1320.Ø	1320.9	45.Ø	48.Ø			
	228	HARS	45	C	1320.Ø	1321	5.Ø	14Ø.Ø	4Ø.Ø		
	2650	DWIN	2	S/F	1320.Ø	1321	5.Ø	5Ø.Ø	25.Ø		
	2800	OTTA	46F	C	1320.Ø	1320.9	6.Ø	6Ø.Ø	26.2		
	808	ØNDR	45	C	1320.Ø		8.5	11Ø.ØD	16.Ø		
	536	ØNDR	45	C	1320.Ø	1321.2	7.Ø	65.Ø	9.Ø		
	4995	ATHN	4	S/F	1320.1	1320.8	8.4	52			
	410	SGMR	47	GB	1320.1	1320.8	4.2D	43			
	8800	SGMR	4	S/F	1320.1	1320.8	1Ø.7	29			
	4995	SGMR	4	S/F	1320.1	1320.8	1Ø.5D	56			
	2695	ATHN	4	S/F	1320.1	1320.8	7.4D	52			
	1415	SGMR	47	GB	1320.1	1321.Ø	4.9D	19Ø			
	606	SGMR	4	S/F	1320.1	1320.8	5.ØD	7Ø			
	1415	ATHN	4	S/F	1320.1	1320.8	8.4D	16Ø			
	7000	SAOP	45	C	1320.3	1324.Ø	4.4	54.Ø	27.Ø		22R
	7000	SAOP	29	PBI	1324.8	1324.8	36.7	2Ø.Ø	1Ø.Ø		
	2800	OTTA	29	PBI	1326.Ø	1326	25.Ø	7.6	2.5		
	8800	SGMR	4	S/F	1352.1	1352.6	2.2	34			
	7000	SAOP	1	S	1352.2	1352.5	2.2	23.Ø	1Ø.Ø		Ø
	6100	KISV	1	24	1352.5	1353.5	1.5	8.Ø			
	2800	OTTA	1	S	1510.Ø	1511	2.Ø	5.6	2.Ø		
	7000	SAOP	1	S	1510.5	1511.1	1.5	7.Ø	3.Ø		56R
	2950	GORK	2Ø	GRF	1512.Ø	1523.Ø	42.Ø	4.Ø	2.Ø		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
24	8400	BERN	4	S/F	1514.0	1515.8	12.0	103.0			
	2650	DWIN	1	S/F	1514.6	1516	3.0	45.0	25.0		
	228	HARS	45	C	1514.0	1515	2.5	160.0	60.0		
	11800	BERN	4	S/F	1514.1	1515.8	12.0	47.0			
	3200	BERN	4	S/F	1514.2	1515.8	12.0	300.0			
	7000	SAOP	4	S/F	1514.2	1515.8	2.4	111.0	50.0		26R
	5200	BERN	47	GB	1514.2	1515.8	12.0	549.0			
	1415	ATHN	4	S/F	1514.5	1515.3	6.5D	55			
	2800	OTTA	4	S/F	1514.5	1515.9	3.0	49.0	16.4		
	2695	ATHN	4	S/F	1514.5	1515.3	3.0D	40			
	4995	ATHN	4	S/F	1514.5	1515.3	6.5	76			
	7000	SAOP	29	PBI	1516.6	1516.6	4.0	10.0	5.0		
	2695	ATHN	4	S/F	1524.5	1527.3	5.0	11			
	2800	OTTA	20	GRF	1526.0	1527	25.0	6.0	2.0		
	2800	OTTA	2	S/F	1624.0	1624.8	2.0	8.0	4.0		
	2800	OTTA	29	PBI	1626.0	1626	20.0	2.6	1.8		
	3200	BERN	47	GB	1700.1	1712.5	35.0	506.0			
	5200	BERN	46	C	1700.1	1712.5	40.0	478.0			
	606	SGMR	4	S/F	1708.3	1712.1	6.0D	170			
	4995	SGMR	4	S/F	1708.3	1712.5	9.0D	58			
	8800	SGMR	4	S/F	1708.3	1712.6	7.5	40			
	11800	BERN	46	C	1709.4	1712.6	9.0	27.0			
	8400	BERN	46	C	1709.5	1712.6	15.0	52.0			
	1415	SGMR	47	GB	1709.6	1712.1	4.7D	180			
	2695	SGMR	4	S/F	1709.6	1712.6	6.2D	83			
	4995	ATHN		S/F	1709.8	1712.5	8.0	42			
	1415	ATHN	4	S/F	1709.8	1712.1	8.0D	110			
	2800	OTTA	4	S/F	1709.9	1712.9	7.5	84.0	18.0		
	2650	DWIN	2	S/F	1710.6	1713	5.0	70.0	30.0		
	245	SGMR	4	S/F	1710.0	1711.1	3.8D	119			
	2695	ATHN	4	S/F	1710.5	1712.5	3.8D	53			
	19600	BERN	46	C	1711.0	1712.9	9.0	42.0			
	410	SGMR	8	S	1711.8	1712.1	1.5D	84			
	2695	ATHN	4	S/F	1717.8	1727.5	14.7D	37			
	4995	SGMR	4	S/F	1723.0	1727.6	9.3D	28			
	4995	ATHN	4	S/F	1723.5	1729.3	9.5	42			
	1415	ATHN	4	S/F	1726.5	1727.6	5.5D	74			
	245	SGMR	47	GB	1726.8	1727.8	7.0D	410			
	2800	OTTA	40	F	1727.0	1727.8	6.0	8.4			
	8800	SGMR	4	S/F	1727.1	1727.6	5.5	17			
	2695	SGMR	4	S/F	1727.1	1727.6	5.7D	13			
	606	SGMR	8	S	1727.1	1726.6	1.2D	200			
	7000	SAOP	4	S/F	1727.2	1727.9	1.2	27.0	13.0		33R
	1415	SGMR	47	GB	1727.5	1729.0	6.3D	100			
	7000	SAOP	45	C	1729.2	1729.9	4.0	17.0	8.0		27R
	2800	OTTA	20	GRF	1745.0	1820	55.0	3.8	2.6		
	2695	PENT	8	S	2010.2	2010.7	.8	3.0	1.5		
	2695	PENT	22	GRF	2028.5	2031	12.0	3.0	1.5		
	1000	TYKW	45	C	2048.0E	2048.4	1.0D	13.0	3.0D		
	1000	TYKW	45	C	2052.8	2053.2	.7	17.0	5.0		
	1000	TYKW	45	C	2054.3	2054.8	1.0	9.0	2.0		
	1000	TYKW	45	C	2209.7	2210.3	1.0	54.0	10.0		
	2000	TYKW	5	S	2209.7	2210.3	1.0	2.5	1.0		
	3750	TYKW	21	GRF	2214.0	2216	55.0	3.5	1.0		
	2000	TYKW	45	C	2215.0	2216.6	3.0	5.0	1.5		
	1000	TYKW	45	C	2215.6	2216.0	2.0	114.0	10.0		
	2695	PENT	1	S	2215.0	2216	3.0	4.6	2.3		
	1000	TYKW	45	C	2220.0	2220.5	1.5	5.0	1.0		
	1000	TYKW	42	SER	2234.0	2237.5	9.0	75.0	2.0		
	1000	TYKW	47	GB	2243.7	2244.9	2.5	1200.0	250.0		
	2000	TYKW	45	C	2244.6	2245.1	.9	6.0	1.5		
	2695	PENT	1	S	2244.6	2245	1.0	3.8	1.8		
	3750	TYKW	5	S	2244.7	2245.0	.5	4.0	1.5		
	2000	TYKW	21	GRF	2350.0	0005	40.0	1.5	.7		
	3750	TYKW	21	GRF	2350.0	0050	220.0	4.0	2.0		
	2695	PENT	240	R	2355.0	2400	5.0	3.0	1.5		
25	260	ØNDR	44	NS	0544.0E		50.5D	155.0	14.0		
	127	TORN	44	NS	0600.0E	1447.6	500.0D	200.0	127.0		V0
	204	IZMI	44	NS	0600.0E		360.0D	20.0			
	33	UPIC	43	NS	0605.2		384.8				
	29	UPIC	43	NS	0605.2		384.8				
	430	KRAK	44	NS	0700.0E		250.0D	200.0U			
	245	PALE	43	NS	1632.0	1812.0	728.0D	110			
	245	PALE	43	NS	1846.0	0052.0	594.0D	5600			
	100	HIRA	44	NS	1921.0E	0300	810.0D	750.0	300.0		
	200	HIRA	44	NS	1921.0E	2334	810.0D	140.0	90.0		SL
	208	VORO	44	NS	2100.0E		240.0D		69.0		
	245	LEAR	43	NS	2322.0	0731.8	609.0D	59			
	2695	PENT	2	S/F	0010.0	0010.5	2.0	6.0			
	1000	TYKW	45	C	0010.0	0011.4	3.0	10.0	1.0		
	2000	TYKW	45	C	0010.0	0010.7	5.0	11.0	2.0		
	9400	TYKW	20	GRF	0010.6	0020	40.0	7.0	3.0		
	2000	TYKW	21	GRF	0035.0	0130	170.0	5.0	2.5		
	9395	PEKG	3	S	0051.0	0058.4	12.0	172.0	21.0		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
				UT	UT	MINUTES	PEAK	MEAN		
25	200	HIRA	46 C	0056.4	0058.7	7.6	520.0	100.0		WL
	200	HIRA		0056.4	0102.5		370.0			WL
	3750	TYKW	45 C	0057.0	0058.2	4.0	117.0	25.0		
	9400	TYKW	21 GRF	0057.0	0135	100.0	16.0	8.0		
	2000	TYKW	45 C	0057.6	0058.4	4.0	57.0	12.0		
	1000	TYKW	47 GB	0057.0	0058.5	3.0	3900.0	700.0		
	2695	PENT	4 S/F	0057.0	0058.2	4.0	81.0	16.0		
	4995	PALE	8 S	0057.1	0058.3	2.0	180			
	1415	PALE	4 S/F	0057.1	0058.6	3.5	280			
	2695	PALE	8 S	0057.1	0058.3	1.7	80			
	245	PALE	47 GB	0057.1	0058.8	2.0	4900			
	500	HIRA	46 C	0057.3	0058.0	2.0	350.0	100.0		WL
	9400	TYKW	5 S	0057.5	0058.3	4.5	191.0	35.0		
	410	PALE	47 GB	0057.5	0058.6	1.6	550			
	606	PALE	47 GB	0057.5	0057.8	1.6	410			
	15400	PALE	8 S	0057.5	0058.1	1.1	90			
	8800	MANI	4 S/F	0057.5	0059.4	5.2	126.0	42.0		
	2695	LEAR	8 S	0057.6	0058.1	1.4	85			
	8800	PALE	8 S	0057.6	0058.1	1.2	290			
	245	LEAR	47 GB	0057.6	0058.6	1.4	2000			
	4995	LEAR	8 S	0057.6	0058.3	1.5	180			
	1415	LEAR	47 GB	0057.6	0058.8	3.2	240			
	17000	NOBE	2 S	0057.7	0058.3	4.5	70.0			R
	8800	LEAR	8 S	0057.8	0058.3	1.0	250			
	1415	MANI	47 GB	0058.0	0059.4	3.5	511.9	170.6		
	15400	LEAR	8 S	0058.1	0058.3	1.2	83			
	4995	MANI	4 S/F	0058.5	0059.4	2.5	244.2	81.4		
	2695	MANI	4 S/F	0058.5	0059.5	2.5	69.5	23.2		
	606	MANI	4 S/F	0058.6	0059.0	2.4	429.2	143.1		
	1000	TYKW	47 GB	0100.0	0100.3	1.0	1250.0	130.0		
	3750	TYKW	21 GRF	0101.0	0135	145.0	7.0	3.5		
	2000	TYKW	45 C	0101.6	0102.1	1.5	5.0	1.0		
	100	HIRA	48 C	0101.8	0102.0	1.4	80000.0			
	245	LEAR	8 S	0101.8	0101.8	1.0	50			
	1415	LEAR	8 S	0101.8	0102.8	1.0	33			
	2695	PENT	40 F	0102.0	0103	6.0	5.4			
	3750	TYKW	5 S	0102.0	0102.6	1.5	6.0	2.0		
	1000	TYKW	45 C	0102.0	0102.7	1.0	50.0	8.0		
	3750	TYKW	5 S	0104.0	0104.6	1.5	4.0	1.5		
	9400	TYKW	45 C	0104.0	0104.6	1.5	12.0	3.0		
	1000	TYKW	45 C	0104.0	0104.6	1.0	56.0	7.0		
	2000	TYKW	5 S	0104.3	0104.4	.7	2.5	1.0		
	9400	TYKW	5 S	0106.4	0106.6	1.0	21.0	7.0		
	3750	TYKW	45 C	0106.4	0106.6	20.0	15.0	3.5		
	3750	TYKW		0106.4	0112.2		12.0			
	2000	TYKW	5 S	0106.6	0106.9	.5	39.0	4.0		
	9395	PEKG	45 C	0108.0	0111.1	17.0	22.0	18.0		
	9400	TYKW	45 C	0109.0	0109.6	1.0	13.0	2.0		
	9400	TYKW	45 C	0111.0	0112.0	17.0	21.0	6.0		
	2695	PENT	240 R	0111.0	0112	1.0	3.0	1.5		
	8800	LEAR	4 S/F	0111.1	0111.8	2.9	25			
	4995	LEAR	8 S	0111.3	0111.8	1.0	19			
	15400	LEAR	4 S/F	0111.8	0111.8	96.4	19			
	8800	PALE	47 GB	0118.6	0120.3	.2	36			
	4995	PALE	8 S	0118.6	0120.3	.2	17			
	245	PALE	47 GB	0119.3	0119.5	10.7	62			
	15400	PALE	8 S	0128.0	0128.6	.6	28			
	2840	PEKG	35 C	0151.0	0157.4	13.0	37.0	11.0		
	9395	PEKG	1 S	0151.6	0158.4	20.0	16.0	6.0		
	9400	TYKW	5 S	0158.5	0159.3	2.0	20.0	4.0		
	2000	TYKW	5 S	0159.0	0159.4	3.0	10.0	5.0		
	1000	TYKW	45 C	0159.0	0159.2	2.0	13.0	2.5		
	3750	TYKW	5 S	0159.0	0159.3	3.0	23.0	9.0		
	2000	TYKW	30 PBI	0202.0		25.0	2.0	1.0		
	3750	TYKW	30 PBI	0202.0		25.0	1.5	.7		
	3750	TYKW	5 S	0219.0	0219.9	2.0	6.0	1.5		
	1000	TYKW	45 C	0219.3	0220.0	1.0	190.0	30.0		
	2000	TYKW	5 S	0219.5	0220.0	1.0	3.0	1.0		
	1415	LEAR	8 S	0219.6	0219.8	.4	190			
	245	LEAR	8 S	0219.6	0219.8	.7	76			
	9400	TYKW	8 S	0219.7	0219.8	.4	4.0	1.5		
	3750	TYKW	5 S	0250.0	0255	20.0	2.0	1.0		
	9400	TYKW	5 S	0253.0	0255 U	10.0	9.0	3.0D		
	2000	TYKW	45 C	0319.0	0319.6	2.0	2.0	.7		
	3750	TYKW	5 S	0319.0	0319.6	2.0	5.0	1.5		
	3750	TYKW	45 C	0334.0	0337	4.0	7.0	2.5		
	1000	TYKW	45 C	0334.0	0336.6	5.0	208.0	20.0		
	2000	TYKW	45 C	0334.0	0337.2	4.0	3.5	1.0		
	1415	PALE	4 S/F	0334.1	0334.3	3.2	230			
	245	PALE	4 S/F	0334.1	0335.3	3.7	130			
	9400	TYKW	5 S	0336.0	0337	4.0	8.0	3.0		
	9100	GORK	1 S	0336.1	0336.8	1.8	14.0	7.0		
	3750	TYKW	30 PBI	0338.0		45.0	2.0	1.0		
	9395	PEKG	1 S	0343.0	0345.5	10.0	9.0			
	650	GORK	23 GRF	0344.6	0429.5	249.4	14.0			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
25	606	PALE	47	GB	0345.3	0345.5	.5	220			
	9100	GORK	1	S	0345.4	0345.7	1.0	10.0	5.0		
	2950	GORK	1	S	0345.4	0345.8	.8	5.0	2.5		
	950	GORK	4	S/F	0345.4	0345.7	.8	102.0			
	1000	TYKW	45	C	0345.4	0345.7	1.0	74.0	10.0		
	650	GORK	4	S/F	0345.4	0345.5	.5	80.0			
	3750	TYKW	5	S	0345.5	0345.7	.5	6.0	2.0		
	2000	TYKW	5	S	0345.5	0345.7	.5	7.0	2.5		
	9400	TYKW	5	S	0345.5	0345.7	.5	11.0	3.0		
	245	PALE	47	GB	0345.8	0346.3	3.3	100			
	245	PALE	8	S	0402.8	0403.0	.3	180			
	2000	TYKW	20	GRF	0430.0	0510	120.0	2.0	1.0		
	3750	TYKW	21	GRF	0430.0	0510	120.0	3.0	1.5		
	9400	TYKW	21	GRF	0430.0	0510	90.0	5.0	2.0		
	9395	PEKG	1	S	0501.0	0509	13.0	9.0	2.3		
	9400	TYKW	5	S	0508.9	0509.0	1.0	12.0	4.0		
	9100	GORK	1	S	0509.6	0510.0	3.4	12.0	6.0		
	6100	KISV	1	S	0519.0	0519.5	1.0	9.0			
	9395	PEKG	1	S	0600.0	0605.5	10.0	8.0	3.0		
	2840	PEKG	3	S	0601.0	0605.4	12.0	20.0	4.3		
	9100	GORK	20	GRF	0604.2	0605.4	17.4	15.0			
	3750	TYKW	5	S	0605.0	0605.4	3.0	10.0	3.0		
	2950	GORK	1	S	0605.1	0605.4	5.2	10.0	4.0		
	2695	LEAR	4	S/F	0605.3	0605.3	490.6	15			
	8800	LEAR	4	S/F	0605.3	0605.3	490.6	16			
	4995	LEAR	4	S/F	0605.3	0605.3	490.6	13			
	9400	TYKW	5	S	0634.4	0634.8	1.5	4.0	1.5		
	6100	KISV			0719.0	0731		3.0			
	6100	KISV	45	C	0729.0	0736	10.0	6.0			
	2650	DWIN	45	C	0731.0		5.0	500.0D			
	6100	KISV	29	PBI	0739.0		21.0	4.0			
	9100	GORK	20	GRF	0745.3	0751.7	63.0	15.0			
	2000	TYKW	20	GRF	0749.0	0754	65.0	1.5	.7		
	3750	TYKW	45	C	0749.0	0752.5	5.0	8.0	4.0		
	9400	TYKW	20	GRF	0750.6	0751.6	40.0	8.0	4.0		
	3750	TYKW	29	PBI	0754.0		50.0	4.0	2.0		
	536	ØNDR	41	F	0850.0	0921.3	80.0	254.0	7.0		
	650	GORK	23	GRF	0850.0	0922.3	109.0	9.0			
	3750	TYKW	45	C	0856.0	0856.8	2.0	5.0	1.5		
	1000	TYKW	45	C	0856.0	0856.8	1.5	3.0	1.0		
	2000	TYKW	45	C	0856.0	0856.8	1.5	2.0	.7		
	2950	GORK	1	S	0856.5	0857.0	1.0	3.0	1.5		
	1000	TYKW	45	C	0905.0	0907.7	4.5	14.0	2.0		
	810	KRAK	2	S/F	0906.5	0907.8	2.3	38.0	5.0		
	9395	PEKG	3	S	0914.0	0921.5	36.0	143.0	15.0		
	808	ØNDR	45	C	0920.0	0921.7	4.5	115.0D	14.5		
	2650	DWIN	1	S/F	0920.0	0921	4.0	35.0	15.0		
	430	KRAK	45	C	0920.1	0920.5	2.2	350.0D	20.0		
	810	KRAK			0920.1	0923.4		12.0			
	810	KRAK	45	C	0920.1	0921.9	3.2	70.0	17.0		
	430	KRAK			0920.1	0922.7		180.0			
	8400	BERN	3	S	0920.3	0921.2	12.0	231.0			
	3200	BERN	3	S	0920.3	0921.2	18.0	70.0			
	5200	BERN	3	S	0920.5	0921.2	18.0	183.0			
	6100	KISV	8	S	0920.5	0921.3	1.5	92.0			
	3750	TYKW	45	C	0920.5	0921.3	5.0	54.0	8.0		
	950	GORK	4	S/F	0920.8	0921.9	3.7	298.0			
	19600	BERN	3	S	0920.8	0921.2	9.0	46.0			
	11800	BERN	3	S	0920.8	0921.2	9.0	145.0			
	1415	LEAR	4	S/F	0920.8	0921.5	2.3	190			
	228	HARS	45	C	0921.0	0921.3	1.0	250.0	85.0		
	2950	GORK	4	S/F	0921.6	0921.3	3.0	35.0	17.0		
	9100	GORK	3	S	0921.0	0921.3	6.0	204.0			
	650	GORK	4	S/F	0921.0	0921.2U	1.0	86.0			
	2695	LEAR	8	S	0921.1	0921.3	.4	31			
	8800	LEAR	8	S	0921.1	0921.3	.2	160			
	4995	LEAR	8	S	0921.1	0921.3	.4	79			
	245	LEAR	8	S	0921.1	0921.1	.5	119			
	950	GORK	29	PBI	0923.5	0924.0					
	536	ØNDR	45	C	1035.0	1035	3.0	24.0	2.0		
	536	ØNDR	42	SER	1206.5	1246.3	80.0	72.0			
	2800	OTTA	3	S	1225.0	1228.8	5.0	24.0	6.0		
	1415	SGMR	4	S/F	1225.3	1228.8	4.7D	54			
	4995	SGMR	4	S/F	1225.8	1228.6	6.8D	23			
	430	KRAK			1226.5	1240.3		180.0			
	430	KRAK	42	SER	1226.5	1227.6	18.5	310.0D			
	2695	SGMR	4	S/F	1226.6	1228.8	4.5D	26			
	1415	ATHN	4	S/F	1226.6	1228.8	3.2D	46			
	808	ØNDR	42	SER	1226.7	1235.2	10.0	118.0D	4.0		
	810	KRAK	3	S	1227.1	1227.8	2.1	46.0	160.0		
	245	SGMR	8	S	1227.1	1227.6	.7D	39			
	606	SGMR	47	GB	1227.1	1228.5	2.4D	730			
	2695	ATHN	4	S/F	1227.3	1228.6	2.5D	24			
	410	SGMR	8	S	1227.3	1227.5	1.5	66			
	8800	SGMR	4	S/F	1227.6	1228.3	4.2	13			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
25	4995	ATHN	4	S/F	1227.6	1228.3	2.4	18			
	2650	DWIN	1	S/F	1230.0	1233	5.0	25.0	10.0		
	810	KRAK	3	S	1234.4	1234.9	1.4	80.0	21.0		
	1415	SGMR	47	GB	1235.0	1236.1	6.8D	28			
	245	SGMR	4	S/F	1237.0	1240.1	3.3	310			
	410	SGMR	4	S/F	1238.3	1240.1	4.7D	110			
	606	SGMR	47	GB	1238.5	1239.8	5.5D	49			
	2800	OTTA	240	R	1318.0	1320	2.0	2.8	1.4		
	2800	OTTA	22	GRF	1503.0	1504	105.0	4.0			
	7000	SAOP	3	S	1503.6	1504.2	1.5	10.0	5.0		15R
	410	SGMR	4	S/F	1654.3	1655.6	2.8	82			
	2800	OTTA	1	S	1655.0	1655.5	2.0	3.4	1.7		
	2800	OTTA	21	GRF	1730.0	1746	60.0	4.0	2.0		
	7000	SAOP	28	PRE	1741.8	1744.3	2.5	8.0	4.0		
	7000	SAOP	3	S	1744.3	1745.5	1.8	27.0	13.0		9L
	2800	OTTA	1	S	1744.6	1745.3	1.5	4.0	2.0		
	7000	SAOP	29	PBI	1746.2	1746.2	22.1	10.0	5.0		
	2800	OTTA	8	S	1809.0	1809.4	.6	3.4	1.7		
	100	HIRA	46	C	2015.0	2016.7	2.6	34000.0	1500.0		WL
	2695	PENT	1	S	2016.0	2016.3	1.0	4.4	2.2		
	100	HIRA	46	C	2021.0	2022.1	2.0	9000.0	1700.0		0
	2800	OTTA	1	S	2021.8	2022	1.5	6.0	3.0		
	2800	OTTA	20	GRF	2045.0	2058	55.0	3.4	1.7		
	3750	TYKW	32	ABS	2125.0	2145	32.0	-3.0	-1.5		
	9400	TYKW	32	ABS	2125.0	2145	33.0	-8.0	-5.0		
	2000	TYKW	45	C	2156.0	2202.5	14.0	143.0	38.0		
	3750	TYKW	45	C	2157.0	2202.3	11.0	455.0	95.0		
	2800	OTTA	4	S/F	2157.0	2202.5	13.0	385.0	43.0		
	9400	TYKW	45	C	2158.0	2202.2	9.0	490.0	120.0		
	1000	TYKW	5	S	2201.0	2203	9.0	3.0	1.5		
	2695	PALE	4	S/F	2201.6E	2202.3	7.0	320			
	8800	PALE	47	GB	2201.6E	2202.1	12.0	870			
	15400	PALE	47	GB	2201.6E	2202.0	12.0	610			
	4995	PALE	47	GB	2201.6E	2202.1	5.7	680			
	17000	NOBE	45	C	2201.6	2202.1	2.6	388.0			0
	1415	PALE	4	S/F	2201.8E	2202.5	2.5	39			
	8800	MANI	3	S	2201.0	2202.5	3.2	289.1	96.4		
	4995	MANI	3	S	2201.6	2202.4	4.0	495.2	165.1		
	2695	MANI	3	S	2202.3	2203.0	4.7	208.2	69.4		
	17000	NOBE	29	PBI	2204.2	2204.2	29.0	31.0			0
	9400	TYKW	30	PBI	2207.0		40.0	30.0	12.0		
	3750	TYKW	30	PBI	2208.0		39.0	15.0	6.0		
	2800	TYKW	30	PBI	2210.0		50.0	6.0	2.0		
	2800	OTTA	30	PBI	2210.0	2210	75.0	10.2	3.4		
	2800	OTTA	8	S	2220.2	2220.5	.8	5.2	2.4		
	2000	TYKW	5	S	2221.5	2221.7	1.5	2.0	.7		
	1000	TYKW	8	S	2221.6	2221.7	.2	15.0	5.0		
	3750	TYKW	8	S	2221.6	2221.7	.3	4.0	1.5		
	3750	TYKW	31	ABS	2247.0	2330	80.0	-7.0	-3.5		
	9400	TYKW	31	ABS	2247.0	2330	83.0	-8.0	-4.0		
	3750	TYKW	5	S	2257.0	2258	4.0	3.0	1.0		
	2000	TYKW	31	ABS	2300.0	2330	60.0	-2.0	-1.0		
	1000	TYKW	8	S	2309.8	2309.9	.2	14.0	5.0		
	1000	TYKW	8	S	2310.5	2310.6	.2	10.0	2.0		
	2000	TYKW	5	S	2311.0	2312	4.0	2.0	1.0		
	1000	TYKW			2327.0	2328.5		14.0			
	1000	TYKW	42	SER	2327.0	2343.9	58.0	64.0	5.0		
	2695	PENT	23	GRF	2330.0	2443	140.0D	7.2			
	2000	TYKW	45	C	2341.0	2344	8.0	9.0	3.0		
	1415	LEAR	47	GB	2341.5	2344.1	5.1	47			
	1415	PALE	4	S/F	2341.8	2344.1	4.8	51			
	606	MANI	4	S/F	2342.5	2346.2	9.5	34.8	11.6		
	1415	MANI	4	S/F	2343.0	2346.0	8.0	85.2	28.4		
	606	PALE	8	S	2343.6	2343.8	.7	41			
	9400	TYKW	5	S	2346.5	2346.7	1.0	7.0	3.0		
	3750	TYKW	5	S	2351.7	2352.2	1.5	1.5	.5		
26	127	TORN	44	NS	0530.0E	1137.7	630.0D	3300.0	56.0		V1
	260	ØNDR	44	NS	0540.0E		508.0D	121.0	10.0		
	204	IZMI	44	NS	0600.0E		360.0D	60.0			
	245	SGMR	43	NS	0912.0	1626.1	528.0D	300			
	245	PALE	43	NS	1634.0	0113.5	727.0D	250			
	200	HIRA	44	NS	1921.0E	2256	810.0D	65.0	20.0		WL
	100	HIRA	44	NS	1921.0E	2034	340.0D	740.0	80.0		ML
	200	VORO	44	NS	2100.0E		240.0D		25.0		
	245	LEAR	43	NS	2322.0	0113.3	610.0D	100			
	2000	TYKW	5	S	0002.0	0009	20.0	2.0	1.0		
	3750	TYKW	5	S	0007.0	0010	15.0	2.0	1.0		
	2000	TYKW	5	S	0010.0	0010.4	1.0	9.0	2.0		
	1415	LEAR	8	S	0010.3	0010.3	.3	29			
	1415	PALE	8	S	0010.3	0010.3	.3	30			
	2695	PENT	2	S/F	0034.5	0036.6	5.0	6.0	3.0		
	9400	TYKW	5	S	0034.5	0037	15.0	4.0	2.0		
	3750	TYKW	45	C	0034.5	0035.3	5.5	11.0	6.0		
	2000	TYKW	20	GRF	0034.5	0036.5	30.0	3.0	1.0		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
					UT	UT	MINUTES	PEAK	MEAN		
26	2695	LEAR	4	S/F	0034.6	0036.1	4.2	89			
	4995	LEAR	4	S/F	0035.1	0035.3	3.7	13			
	4995	PALE	8	S	0035.1	0035.5	.2	17			
	3750	TYKW	30	PBI	0040.0		38.0	4.0	2.0		
	9400	TYKW	5	S	0046.5	0046.7	1.0	10.0	2.5		
	1000	TYKW	45	C	0049.0	0053.5	7.0	45.0	2.0		
	3750	TYKW	5	S	0100.0	0101	5.0	2.0	1.0		
	1000	TYKW	42	SER	0101.5	0104.2	4.0	4.0	.5		
	9400	TYKW	5	S	0110.0	0110.8	2.5	3.0	1.5		
	3750	TYKW	5	S	0120.0	0125	15.0	1.5	.7		
	3750	TYKW	5	S	0139.0	0140.5	9.0	2.5	1.0		
	3750	TYKW	28	PRE	0205.0	0312	78.0	13.0	5.0		
	9400	TYKW	20	PRE	0216.0	0300	64.0	11.0	6.0		
	2000	TYKW	5	S	0216.6	0217.5	10.0	2.5	1.0		
	2000	TYKW	28	PRE	0250.0	0310	33.0	2.0	1.0		
	1000	TYKW	28	PRE	0255.0	0308	28.0	3.0	.5		
	245	PALE	8	S	0307.8	0308.1	1.3	50			
	245	LEAR	4	S/F	0308.1	0308.1	136.2	32			
	9400	TYKW	5	S	0320.0	0331	72.0	20.0	9.0		
	3750	TYKW	45	C	0323.0	0330.8	20.0	30.0	18.0		
	1000	TYKW	45	C	0323.0	0333.0	18.0	30.0	12.0		
	2000	TYKW	45	C	0323.0	0325.7	17.0	36.0	17.0		
	500	HIRA	46	C	0323.0	0326.2	17.0	100.0	35.0		ML
	650	GORK	23	GRF	0324.0	0343.3	64.8	27.0			
	650	GORK	46	C	0324.0	0325.6	6.4	85.0			
	650	GORK			0324.0	0330.0		58.0			
	650	GORK			0324.0	0327.7		84.0			
	9100	GORK	20	GRF	0324.4	0330.1	204.0	136.0			
	1415	LEAR	4	S/F	0324.8	0331.1	13.3	35			
	606	MANI	4	S/F	0325.0	0328.1	32.0	105.0	35.0		
	2695	LEAR	4	S/F	0325.0	0325.6	13.3	33			
	1415	MANI	4	S/F	0325.5	0335.5	27.5	36.1	12.0		
	4995	LEAR	4	S/F	0325.5	0325.6	12.3	15			
	2695	MANI	4	S/F	0325.7	0338.0	18.3	17.3	5.8		
	8806	LEAR	4	S/F	0327.6	0329.3	10.5	15			
	2000	TYKW	30	PBI	0340.0		50.0	8.0	4.0		
	1000	TYKW	30	PBI	0341.0		55.0	4.0	2.0		
	1000	TYKW	42	SER	0341.5	0347.1	24.0	30.0	2.0		
	3750	TYKW	30	PBI	0343.0		47.0	10.0	4.0		
	500	HIRA	41	F	0346.6	0347.0	42.0	500.0			SL
	650	GORK			0346.6	0349.5		80.0			
	650	GORK	46	C	0346.6	0347.0	71.0	95.0			
	606	PALE	47	GB	0346.6	0347.1	3.2	300			
	410	PALE	47	GB	0346.8	0347.1	.3	200			
	3750	TYKW	5	S	0347.0	0349	5.0	2.5	1.0		
	9400	TYKW	5	S	0356.0	0356.8	3.0	4.0	1.5		
	1000	TYKW	42	SER	0408.0	0417.8	24.0	9.0	.5		
	3750	TYKW	31	ABS	0430.0	0455	52.0	-6.0	-3.0		
	2000	TYKW	31	ABS	0430.0	0500	52.0	-2.0	-.1		
	950	GORK	21	GRF	0430.0E		218.0D				
	9400	TYKW	31	ABS	0432.0	0455	50.0	-4.0	-2.0		
	1000	TYKW	42	SER	0452.0	0453.0	10.0	4.0	.7		
	245	LEAR	4	S/F	0521.5	0522.1	6.0	11			
	410	LEAR	4	S/F	0521.5	0522.1	6.0	11			
	4995	LEAR	4	S/F	0521.5	0522.1	6.0	11			
	8800	LEAR	4	S/F	0521.5	0522.1	6.0	11			
	8800	LEAR	4	S/F	0529.1	0537.8	15.0	11			
	4995	LEAR	4	S/F	0529.1	0533.5	15.0	15			
	3750	TYKW	20	GRF	0530.0	0535	30.0	3.0	1.5		
	2000	TYKW	20	GRF	0530.0	0532.4	30.0	2.0	1.0		
	9400	TYKW	21	GRF	0530.0	0540	50.0	3.0	1.5		
	650	GORK	22	GRF	0605.4	0626.3	35.0	26.0			
	536	ØNDR	42	SER	0606.0	0823.7	138.0	130.0	5.0		
	1000	TYKW	42	SER	0609.0	0620.3	13.0	4.5	1.0		
	6100	KISV	27	RF	0615.0	0622.5	13.0	7.0			
	9400	TYKW	5	S	0616.5	0617.6	3.0	4.0	1.5		
	1000	TYKW	45	C	0624.5	0626.3	7.5	7.0	1.5		
	950	GORK	1	S	0625.7	0626.4	1.3	7.3	3.5		
	950	GORK	2	S/F	0629.0	0629.5	.9	6.2			
	2000	TYKW	21	GRF	0630.0	0700	100.0	2.0	1.0		
	2695	ATHN	4	S/F	0630.6	0645.3	71.5D	21			
	1415	ATHN	4	S/F	0632.8	0648.6	67.0D	15			
	3750	TYKW	45	C	0634.0	0643.1	36.0	18.0	8.0		
	9400	TYKW	45	C	0634.0	0643.0	36.0	23.0	11.0		
	4995	ATHN	4	S/F	0634.3	0643.3	61.0	44			
	6100	KISV	27	RF	0641.0	0650	34.0	8.0			
	9100	GORK	22	GRF	0641.0	0643.0	68.5	20.0			
	2950	GORK	20	GRF	0642.0	0643.0	22.0	8.5			
	6100	KISV	1	S	0642.0	0643	2.0	7.0			
	4995	LEAR	4	S/F	0642.3	0643.0	2.8	23			
	8800	LEAR	8	S	0642.6	0642.0	2.0	29			
	2695	LEAR	4	S/F	0642.8	0643.1	565.6	13			
	15400	LEAR	8	S	0643.0	0644.6	.1	15			
	4995	LEAR	8	S	0643.0	0647.0	4.0D	23			
	15400	LEAR	4	S/F	0647.0	0655.1	12.8	25			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
26	8800	LEAR	4	S/F	0647.6	0649.6	4.5	23			
	15400	LEAR	8	S	0655.1	0701.6	6.5D	25			
	3750	TYKW	30	PBI	0710.0		60.0	8.0	3.0		
	9400	TYKW	30	PBI	0710.0		60.0	10.0	5.0		
	650	GORK	23	GRF	0717.0	0753.5	79.0	8.0			
	1000	TYKW	42	SER	0730.0	0732.5	16.0	4.5	.7		
	3750	TYKW	5	S	0731.5	0732.2	3.5	3.5	1.5		
	9400	TYKW	5	S	0731.5	0732	1.5	5.0	2.0		
	2000	TYKW	5	S	0732.0	0732.5	3.5	3.0	1.0		
	430	KRAK	45	C	0750.6	0754.2	7.1	52.0	6.0		
	1000	TYKW	45	C	0756.0	0803.3	14.0	16.0	2.5		
	606	MANI	4	S/F	0757.5	0804.4	11.5	23.1	7.7		
	650	GORK	4	S/F	0800.0	0802.7	7.1	20.0	10.0		
	950	GORK	4	S/F	0800.0	0800.3	2.1	16.0			
	808	ØNDR	2	S/F	0800.7	0806.1	4.0	15.0	9.0		
	1415	MANI	2	S/F	0802.0	0804.9	4.5	8.2	2.7		
	430	KRAK	2	S/F	0823.1	0823.8	1.3	18.0	3.0		
	1000	TYKW	45	C	0827.0	0827.7	2.5	15.0	2.5		
	245	LEAR	8	S	0902.0	0902.1	.1	110			
	6100	KISV	27	RF	1105.0	1106	11.0	6.0			
	810	KRAK	8	S	1108.6	1108.6	.5	12.0			
	2695	SGMR	4	S/F	1109.3	1110.3	2.2D	11			
	2800	OTTA	1	S	1109.7	1110.5	2.3	6.2	2.8		
	2950	GORK	1	S	1109.8	1110.3	2.0	6.0	3.0		
	1415	SGMR	8	S	1110.0	1110.5	2.0	08			
	606	SGMR	8	S	1123.3	1124.0	1.3	47			
	650	GORK			1123.5	1133.7		22.0			
	650	GORK	46	C	1123.5	1124.3	12.5	98.0			
	1415	SGMR	8	S	1123.6	1124.1	1.4D	08			
	2800	OTTA	1	S	1123.8	1124.5	4.0	2.8	1.4		
	430	KRAK	2	S/F	1201.6	1202.3	3.0	20.0			
	2800	OTTA	240	R	1225.0	1233	8.0	4.6			
	2800	OTTA	21	GRF	1300.0	1420	230.0	14.8	7.4		
	7000	SAOP	28	PRE	1309.5	1341.3	31.8	16.0	8.0		
	6100	KISV	8	S	1340.0	1340.7	2.0	23.0			
	11800	BERN	3	S	1341.0	1342.0	2.0	80.0			
	8400	BERN	3	S	1341.0	1342.0	2.0	84.0			
	15400	SGMR	8	S	1341.1	1341.3	.7D	32			
	3200	BERN	3	S	1341.1	1342.3	1.0	5.0			
	8800	SGMR	4	S/F	1341.1	1341.6	2.4D	81			
	5200	BERN	3	S	1341.1	1342.3	1.2	29.0			
	7000	SAOP	3	S	1341.3	1341.6	.7	70.0	35.0		9R
	19600	BERN	3	S	1341.3	1342.8	1.0	21.0			
	4995	SGMR	8	S	1341.3	1341.5	1.5	24			
	7000	SAOP	29	PBI	1341.9	1341.9	73.1	32.0	15.0		
	245	SGMR	8	S	1445.0	1445.0	1.6	340			
	606	SGMR	8	S	1445.6	1446.3	1.0D	34			
	2800	OTTA	1	S	1446.7	1447	5.0	4.2	1.6		
	410	SGMR	4	S/F	1635.8	1646.1	10.3	230			
	606	SGMR	8	S	1646.0	1646.1	.3D	32			
	5200	BERN	3	S	1803.1	1805.1	10.0	54.0			ONLY PAPER REC
	3200	BERN	3	S	1803.1	1805.1	10.0	.0			ONLY PAPER REC
	7000	SAOP	4	S/F	1803.6	1805.4	2.4	68.0	34.0		11L
	2800	OTTA	3	S	1804.0	1805.2	5.0	13.2	4.4		
	4995	PALE	8	S	1804.3	1805.0	1.3	37			
	2695	PALE	8	S	1804.3	1805.3	1.2	20			
	8800	PALE	8	S	1804.5	1805.1	1.3	73			
	15400	PALE	8	S	1804.8	1805.1	.7	40			
	7000	SAOP	29	PBI	1806.0	1806.0	6.7	10.0	5.0		
	2800	OTTA	1	S	1908.0	1911	5.0	3.4	1.6		
	2800	OTTA	240	R	2000.0	2027	27.0	7.4	3.7		
	245	PALE	8	S	2132.3	2132.6	.5	89			
	2800	OTTA	22	GRF	2140.0	2235	100.0	5.4	2.7		
	2000	TYKW	20	GRF	2140.0	2230	95.0	3.0	1.5		
	3750	TYKW	20	GRF	2150.0	2230	85.0	5.0	3.0		
	9400	TYKW	20	GRF	2150.0	2204	50.0	10.0	5.0		
	1000	TYKW	20	GRF	2210.0	2245	65.0	2.0	1.0		
	2695	PENT	20	GRF	2322.0	0020	140.0	12.0	7.0		
	9400	TYKW	21	GRF	2323.0	0020	137.0	18.0	8.0		
	3750	TYKW	20	GRF	2323.0	2335.5	35.0	8.0	3.5		
	2000	TYKW	20	GRF	2323.6	2335	35.0	2.0	1.0		
	2000	TYKW	21	GRF	2323.0	0015	117.0	7.0	3.5		
	9400	TYKW	20	GRF	2323.0	2335.5	35.0	10.0	5.0		
	3750	TYKW	21	GRF	2323.0	0017	127.0	14.0	6.0		
	1000	TYKW			2327.0	0010.4		37.0			
	1000	TYKW			2327.0	0003.5		22.0			
	1000	TYKW	5	S	2340.0	2341.1	2.5	2.0	.7		
	1000	TYKW	45	C	2349.0	2352.3	10.0	2.5	1.0		
27	127	TORN	44	NS	0600.0E	0934.5	600.0D	20.0	1.0		V0
	260	ØNDR	44	NS	0653.0E		435.0D	67.0	5.0		
	430	KRAK	43	NS	0845.0	0900 U	30.0D	50.0U			
	245	SGMR	43	NS	0913.0	1158.8	527.0D	320			
	245	PALE	43	NS	1638.0	1847.0	722.0D	180			
	208	VORO	44	NS	2100.0E		240.0D		8.0		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	POLARIZATION OR REMARKS
27	1000	TYKW	45 C	0040.0	0054	2.0	2.0	.7		
	3750	TYKW	5 S	0053.0	0054.2	10.0	2.5	1.0		
	1000	TYKW	31 ABS	0100.0	0245	240.0	-3.0	-1.5		
	3750	TYKW	5 S	0108.5	0109.7	10.0	2.0	.7		
	9400	TYKW	5 S	0109.0	0110	15.0	3.0	1.5		
	2000	TYKW	31 ABS	0120.0	0245	160.0	-7.0	-4.0		
	3750	TYKW	31 ABS	0130.0	0245	150.0	-11.0	-6.0		
	9400	TYKW	31 ABS	0140.0	0245	140.0	-11.0	-5.5		
	19600	BERN	46 C	0448.0	0917.9	140.0	73.0			
	9400	TYKW	5 S	0526.0	0532	20.0	4.0	2.0		
	3750	TYKW	5 S	0526.0	0532	28.0	2.0	1.0		
	9400	TYKW	5 S	0600.0	0601	10.0	4.0	2.0		
	33	UPIC	42 SER	0626.6	0708	42.2				
	29	UPIC	42 SER	0626.7	0708.5	42.3				
	1000	TYKW	45 C	0634.0	0641.7	14.0	7.0	1.5		
	2000	TYKW	45 C	0641.0	0642.1	2.0	25.0	5.0		
	2950	GORK	1 S	0641.2	0642.0	2.0	5.0	2.5		
	2000	TYKW	45 C	0701.0	0703.1	9.0	8.0	1.5		
	430	KRAK	8 S	0707.9	0708.0	.6	130.0			
	536	ØNDR	8 S	0708.3	0708.3	.2	22.0			
	650	GORK	2 S/F	0753.9	0754.2	1.3	33.0	4.0		
	3750	TYKW	45 C	0754.0	0754.8	2.0	7.0	2.0		
	9400	TYKW	45 C	0754.0	0754.8	1.5	9.0	1.5		
	536	ØNDR	2 S/F	0754.0	0754.6	1.5	21.0	2.0		
	2000	TYKW	45 C	0754.0	0754.8	2.0	5.0	1.5		
	1000	TYKW	45 C	0754.0	0754.4	2.0	15.0	3.5		
	2950	GORK	1 S	0754.1	0754.9	2.0	5.0	2.5		
	950	GORK	4 S/F	0754.2	0754.9	1.2	13.0			
	1415	LEAR	8 S	0754.6	0754.8	.4	45			
	6100	KISV	45 C	0755.0	0755.7	1.5	5.0			
	4995	LEAR	4 S/F	0811.8	0812.8	6.3	08			
	2695	LEAR	4 S/F	0812.0	0812.8	5.8	07			
	9400	TYKW	28 PRE	0812.0	0837	36.0	14.0	6.0		
	3750	TYKW	28 PRE	0812.0	0825.5	35.0	10.0	5.0		
	2950	GORK	1 S	0812.2	0812.5	2.5	3.0	1.5		
	15400	LEAR	4 S/F	0821.5	0832.5	14.3	17			
	1415	LEAR	4 S/F	0821.5	0831.8	14.3	11			
	4995	LEAR	4 S/F	0821.5	0825.8	14.3	15			
	8800	LEAR	4 S/F	0821.5	0825.8	14.3	09			
	2695	LEAR	4 S/F	0821.5	0825.8	14.3	17			
	2000	TYKW	28 PRE	0822.0	0825.5	25.0	9.0	5.0		
	9395	PEKG	21 GRF	0822.0	0900.5	94.0	81.4	36.0		
	2840	PEKG	4 S/F	0822.0	0858	76.0	288.0	64.0		
	2950	GORK	21 GRF	0822.6	0918.0	80.0E	34.0	17.0		
	1000	TYKW	28 PRE	0825.0	0826.3	22.0	19.0	2.0		
	650	GORK		0841.5	0909.5		86.0			
	650	GORK		0841.5	0922.5		60.0			
	650	GORK		0841.5	0925.8		90.0			
	650	GORK	46 C	0841.5	0903.7	54.0	92.0			
	536	ØNDR	48 C	0843.0	0904.8	67.0	62.0	13.0		
	5200	BERN	46 C	0845.1	0857.8	140.0	163.0			
	808	ØNDR	48 C	0845.5		50.0	98.0D	64.0		
	2695	LEAR	47 GB	0845.6	0908.6	33.0	330			
	8400	BERN	46 C	0845.7	0900.0	140.0	115.0			
	3200	BERN	46 C	0845.8	0900.0	140.0	208.0			
	11800	BERN	46 C	0846.0	0908.6	140.0	84.0			
	1415	LEAR	47 GB	0846.0	0909.6	31.1	280			
	260	ØNDR	48 C	0846.5	0850.8	27.0	175.0	33.0		
	228	HARS	27 RF	0846.7	0854.6	34.0	200.0	10.0		
	4995	LEAR	47 GB	0846.8	0857.0	31.8	150			
	8800	LEAR	47 GB	0846.8	0903.0	24.3	110			
	245	LEAR	47 GB	0846.8	0852.3	19.8	330			
	3000	IZMI	45 C	0847.0	0858.3	27.0	244.0	100.0		
	606	MANI	4 S/F	0847.0	0904.5	32.5	64.4	21.5		
	2650	DWIN	47 GB	0847.0	0905	30.0	470.0	200.0		
	950	GORK		0847.0	0925.9		90.0			
	2000	TYKW	47 GB	0847.0	0909.3	33.0	530.0	100.0		
	950	GORK		0847.0	0909.7		113.0			
	950	GORK	46 C	0847.0	0904.5	40.0	103.0			
	3750	TYKW	45 C	0847.0	0858.1	33.0	255.0	70.0		
	950	GORK		0847.0	0914.0		88.0			
	1000	TYKW	45 C	0847.0	0904.3	24.0	152.0	70.0D		
	2950	GORK		0847.1	0908.4		126.0D			
	2950	GORK		0847.1	0900 U		130.0D			
	2950	GORK	46 C	0847.1	0849.0	27.0	39.0			
	1415	ATHN	4 S/F	0847.3	0909.6	53.0D	330			
	2695	ATHN	4 S/F	0847.3	0858.0	61.3D	200			
	810	KRAK	8 S	0847.5	0848.0	1.0	41.0			
	6100	KISV	46 C	0847.5	0850.5	23.0	69.0			
	4995	ATHN	4 S/F	0847.8	0857.8	64.3	119			
	15000	KISV	20 GRF	0848.0	0910	60.0	70.0			
	9100	GORK	22 GRF	0848.0	0900.0	54.0	80.0			
	9400	TYKW	45 C	0848.0	0902.0	28.0D	90.0	60.0D		
	1415	MANI	4 S/F	0848.2	0909.0	31.8	159.3	53.1		
	2695	MANI	4 S/F	0848.2	0909.0	28.3	269.1	89.7		
	204	IZMI	41 F	0849.0	0854.2	22.0	100.0			
	4995	MANI	4 S/F	0849.1	0905.9	26.9	88.2	29.4		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	POLARIZATION OR REMARKS
27	127	TORN	4	S/F	0854.0	0854.7	1.8	150.0	80.0		
	15400	LEAR	4	S/F	0856.8	0857.0	14.3	52			
	127	TORN	27	RF	0902.0	0908.2	18.0	90.0	20.0		
	33	UPIC	48	C	0902.5		41.2				
	29	UPIC	48	C	0902.5	0907.5	40.3				
	6100	KISV	29	PBI	0910.0	0910	60.0	44.0			
	2000	TYKW	29	PBI	0920.0		2.0D	11.0	10.0D		
	3750	TYKW	29	PBI	0920.0		7.0D	25.0	22.0D		
	410	SGMR	4	S/F	0920.0	0922.5	6.0	22			
	606	SGMR	4	S/F	0921.3	0922.3	5.8D	89			
	650	GORK	4	S/F	0931.3	0934.4	4.8	74.0			
	204	IZMI	41	F	0933.0	0939.7	5.3	110.0			
	410	SGMR	4	S/F	0933.0	0934.1	2.5D	33			
	606	SGMR	4	S/F	0933.1	0934.3	2.9D	80			
	245	SGMR	8	S	0933.1	0934.1	2.0	23			
	127	TORN	45	C	0937.2	0939.0	2.5	80.0	4.0		
	536	ØNDR	8	S	1049.2	1049.2	.3	52.0			
	5200	BERN	1	S	1112.1	1113.2	27.0	19.0			
	8400	BERN	1	S	1112.6	1113.1	15.0	32.0			
	4995	SGMR	4	S/F	1112.8	1113.1	2.5	18			
	11800	BERN	1	S	1112.8	1113.1	15.0	16.0			
	8800	SGMR	4	S/F	1112.8	1113.3	3.3D	26			
	3200	BERN	1	S	1113.6	1113.2	27.0	3.0			
	6100	KISV	4	S/F	1113.0	1113.7	7.0	10.0			
	808	ØNDR	45	C	1253.7	1255.8	26.0	62.0	13.0		
	11800	BERN	46	C	1253.7	1255.6	15.0	428.0			
	3200	BERN	47	GB	1253.7	1255.7	18.0	538.0			
	5200	BERN	47	GB	1253.7	1255.6	18.0	612.0			
	8400	BERN	47	GB	1253.7	1255.6	15.0	556.0			
	606	SGMR	47	GB	1253.8	1254.1U	0.3D	630			
	4995	ATHN	47	GB	1253.8	1255.6	14.5	520			
	536	ØNDR	45	C	1253.8	1254.8	2.5	78.0	5.0		
	810	KRAK	45	C	1253.9	1255.9	9.0D	64.0			
	6100	KISV	8	S	1254.0	1255.7	6.0	200.0			
	2650	DWIN	2	S	1254.0		10.0	480.0	200.0		
	7000	SAOP	4	S/F	1254.0	1255.7	4.0	578.0	289.0		ØR
	1415	SGMR	8	S	1254.0	1256.0U	20.0L	380			
	606	SGMR	47	GB	1254.0	1255.0	7.0D	640			
	2695	ATHN	47	GB	1254.0	1255.6	16.0D	580			
	2800	OTTA	47	GB	1254.0	1256	9.0	575.0	95.0		
	1415	ATHN	4	S/F	1254.1	1255.8	23.0D	360			
	35000	BERN	4	S/F	1254.5	1255.6	12.0	202.0			
	19600	BERN	46	C	1254.5	1255.6	12.0	240.0			
	15400	SGMR	8	S	1255.0	1255.6	0.6D	250			
	4995	SGMR	8	S	1255.0	1255.6U	0.6D	490			
	29	UPIC	45	C	1255.0	1255.6	.9				
	33	UPIC	45	C	1255.0	1255.5	.9				
	8800	SGMR	8	S	1255.1	1255.6U	0.5D	410			
	2695	SGMR	47	GB	1255.3	1255.6U	0.3D	520			
	7000	SAOP	29	PBI	1258.6	1258.8	7.1	12.0	6.0		
	2800	OTTA	29	PBI	1303.0	1303	10.0	11.0	5.0		
	7000	SAOP	3	S	1410.4	1410.9	1.2	17.0	8.0		Ø
	2800	OTTA	20	GRF	1755.0	1805	45.0	4.2	2.1		
	2800	OTTA	21	GRF	2030.0	2110	180.0	6.4	3.2		
	3750	TYKW	5	S	2106.5	2107.2	2.0	12.0	3.0		
	1000	TYKW	45	C	2106.5	2107.2	2.0	6.0	2.0		
	2800	OTTA	1	S	2106.9	2107.2	2.0	6.0	2.2		
	9400	TYKW	5	S	2107.0E	2107.2	1.0D	12.0	4.0D		
	2800	OTTA	8	S	2127.8	2128	.8	4.8	2.2		
	3750	TYKW	5	S	2128.0U	2128.3	1.0U	7.0	2.0U		
	2000	TYKW	5	S	2128.0U	2128.2	1.0U	4.0	1.0U		
	9400	TYKW	5	S	2128.0U	2128.2	1.0U	5.0	1.5U		INTERFERENCE
	1000	TYKW	5	S	2128.3U	2128.3	2.0U	4.0	1.5U		
	9400	TYKW	5	S	2148.0	2148.6	2.0	15.0	4.0		
	3750	TYKW	5	S	2148.3	2148.6	.7	2.5	1.0		
	2800	OTTA	3	S	2157.0	2157.4	1.0	11.8	4.0		
	1000	TYKW	42	SER	2256.0	2257.3	2.0	99.0	5.0		
	3750	TYKW	5	S	2257.0	2257.3	1.0	7.0	2.0		
	9400	TYKW	5	S	2257.0	2257.3	1.0	9.0	2.0		
	2000	TYKW	5	S	2257.0	2257.4	1.5	11.0	2.5		
28	245	LEAR	43	NS	0024.6	0106.1	547.4D	37			
	260	ØNDR	44	NS	0612.0E	0940.9	478.0D	22.0			
	430	KRAK	43	NS	0834.5	0928.3	165.0D	75.0			
	127	TORN	43	NS	0900.6		180.0D				VØ,DISTURBED
	208	VORO	44	NS	2100.0E		240.0D	240.0	9.0		
	3750	TYKW	45	C	0023.0	0023.8	7.0	46.0	8.0		
	2840	PEKG	4	S/F	0023.0	0023.5	13.0	60.3	11.0		
	9395	PEKG	2	S/F	0023.0	0023.7	4.0	53.0	18.0		
	500	HIRA	7	C	0023.1	0023.5	.6	600.0	150.0		WR
	2695	PENT	4	S/F	0023.2	0023.9	7.0	58.0	14.6		
	2695	LEAR	4	S/F	0023.3	0023.8	2.5	64			
	1415	LEAR	4	S/F	0023.3	0023.8	2.2	37			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
28	4995	LEAR	8	S	0023.3	0023.8	1.0	41			
	15400	LEAR	8	S	0023.3	0023.6	.5	77			
	8800	LEAR	8	S	0023.3	0023.6	.7	45			
	2000	TYKW	5	S	0023.3	0023.8	9.0	49.0	9.0		
	9400	TYKW	45	C	0023.3	0023.7	2.5	50.0	13.0		
	1000	TYKW	45	C	0023.3	0023.9	6.5	57.0	9.0		
	17000	NOBE	1	S	0023.3	0023.7	.7	77.0			0
	15400	LEAR	8	S	0040.8	0040.8	.2	25			
	2695	LEAR	8	S	0040.8	0040.8	.2	15			
	3750	TYKW	20	GRF	0100.0	0140	60.0	2.0	1.0		
	2000	TYKW	5	S	0113.5	0114.2	1.5	4.0	1.0		
	1000	TYKW	45	C	0219.0	0333	95.0	4.0	1.0		
	15400	LEAR	8	S	0255.0	0255.1	.1	25			
	2695	LEAR	8	S	0255.0	0255.1	.1	08			
	8800	LEAR	8	S	0257.3	0257.8	.8	31			
	9400	TYKW	5	S	0257.3	0257.8	1.5	18.0	5.0		
	3750	TYKW	5	S	0257.3	0257.8	1.5	3.0	1.0		
	9395	PEKG	5	S	0257.4	0257.8	2.6	20.0	4.0		
	4995	LEAR	4	S/F	0257.6	0257.8	115.2	15			
	3750	TYKW	21	GRF	0352.0	0451	110.0	4.0	2.0		
	9395	PEKG			0358.0E	0359		40.0D			
	2950	GORK	3	S	0358.3	0359.1	1.9	105.0	50.0		
	2000	TYKW	5	S	0358.5	0359.2	6.5	93.0	25.0		
	2000	TYKW	45	C	0358.5	0359.2	11.0	22.0	4.0		
	9400	TYKW	45	C	0358.5	0359.1	3.5	50.0	11.0		
	3750	TYKW	5	S	0358.5	0359.1	5.5	100.0	20.0		
	9100	GORK	3	S	0358.5	0358.9	4.7	50.0			
	650	GORK	4	S/F	0358.6	0359.2	3.2	90.0			
	1415	ATHN	4	S/F	0358.6	0359.1	2.9D	56			
	8800	LEAR	8	S	0358.6	0359.1	1.0	64			
	4995	LEAR	8	S	0358.6	0359.1	1.5	76			
	2695	LEAR	4	S/F	0358.6	0359.1	2.9	119			
	4995	ATHN	4	S/F	0358.6	0359.1	3.0	66			
	1415	LEAR	4	S/F	0358.6	0359.1	2.4	67			
	2695	ATHN	4	S/F	0358.6	0359.1	2.9D	110			
	15400	LEAR	8	S	0358.6	0358.8	.7	39			
	17000	NOBE	1	S	0358.7	0359.1	6.0	18.0			0
	950	GORK	20	GRF	0358.7	0359.5	10.0	25.0	12.0		
	2695	PALE	8	S	0358.8	0359.1	1.3	92			
	1415	PALE	8	S	0358.8	0359.1	1.5	62			
	8800	MANI	3	S	0400.0	0400.5	3.5	70.4	23.5		
	606	MANI	3	S	0400.0	0400.7	2.5	105.1	35.0		
	4995	MANI	3	S	0400.0	0400.5	3.0	96.2	32.1		
	1415	MANI	3	S	0400.2	0400.6	4.8	49.3	16.4		
	2695	MANI	3	S	0400.2	0400.7	4.3	136.8	45.6		
	2950	GORK	29	PBI	0400.2	0400.2	6.6	27.0			
	9400	TYKW	29	PBI	0402.0		10.0	3.0	1.5		
	3750	TYKW	29	PBI	0404.0		10.0	3.0	1.0		
	2000	TYKW	29	PBI	0405.0		10.0	2.0	.7		
	2000	TYKW	20	GRF	0420.0	0505	100.0	2.0	1.0		
	9400	TYKW	5	S	0430.0	0430.3	1.0	2.0	1.0		
	9400	TYKW	20	GRF	0432.0	0445	60.0	3.0	1.5		
	3750	TYKW	5	S	0437.6	0438.5	10.0	7.0	2.0		
	4995	LEAR	4	S/F	0438.3	0438.5	316.6	13			
	8800	LEAR	8	S	0508.8	0508.8	.5	11			
	15400	LEAR	4	S/F	0508.8	0508.8	377.6	15			
	3750	TYKW	21	GRF	0640.0	0745	120.0	8.0	4.0		
	2000	TYKW	21	GRF	0640.0	0725	120.0	4.0	2.0		
	9400	TYKW	20	GRF	0650.0	0720	90.0	4.0	2.0		
	6100	KISV	4	S/F	0651.0	0653	3.0	3.0			
	1000	TYKW	42	SER	0653.6	0654.2	2.5D	10.0	.5D		INTERFERENCE
	2000	TYKW	5	S	0655.6	0655.9	1.0	2.0	.7		
	6100	KISV	4	S/F	0714.0	0715	6.0	4.0			
	2000	TYKW	45	C	0715.0	0716	1.5D	3.0	1.5D		INTERFERENCE
	3750	TYKW	5	S	0715.0	0716.0	4.0	7.0	3.0		
	2950	GORK	20	GRF	0715.0	0716.0	23.0	5.0	2.5		
	430	KRAK			0834.5	1036.3		74.0			
	536	0NDR	42	SER	0845.6	0912.2	67.0	15.0			
	29	UPIC	3	S	0915.0	0915.3	.5				
	33	UPIC	4	S/F	0918.0	0918.4	.7				
	536	0NDR	42	SER	1030.0	1040.8	21.0	21.0			
	2800	OTTA	20	GRF	1300.0	1315	30.0	4.8	2.4		
	2695	PENT	20	GRF	1440.0	1450	55.0	3.0	1.5		
	2800	OTTA	22	GRF	1740.0	1900	110.0	5.6	2.6		
	3750	TYKW	20	GRF	2235.0	2300	50.0	2.0	1.0		
29	245	PALE	43	NS	1955.1	2015.0	215.4D	310			
	3750	TYKW	32	ABS	0010.0	0030	26.0	-3.0	-1.5		
	9400	TYKW	32	ABS	0010.0	0030	26.0	-4.0	-2.0		
	2000	TYKW	31	ABS	0010.0	0031	27.5	-1.5	-.7		
	1000	TYKW	32	ABS	0010.0	0030	28.0	-1.5	-.7		
	1415	MANI	4	S/F	0034.0	0044.9	14.0	103.5	34.5		
	4995	MANI	4	S/F	0034.5	0041.7	16.5	164.4	54.8		
	15400	LEAR	4	S/F	0034.6	0041.5	39.2	110			
	3750	TYKW	45	C	0036.0	0041.5	24.0	71.0	20.0		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	POLARIZATION OR REMARKS
29	9400	TYKW	45	C	0036.0	0041.5	34.0	138.0	38.0		
	4995	LEAR	4	S/F	0036.5	0041.5	20.0	119			
	8800	MANI	4	S/F	0036.5	0041.7	14.5	234.5	78.2		
	2695	PENT	4	S/F	0037.0	0042	15.0	48.0	22.8		
	17000	NOBE	21	GRF	0037.1	0041.5	67.0	82.0			R
	2695	MANI	4	S/F	0037.4	0042.3	10.6	56.6	18.9		
	8800	LEAR	4	S/F	0037.5	0041.5	32.5	160			
	1415	LEAR	8	S	0037.5	0040.5	1.1	16			
	2000	TYKW	45	C	0037.5	0041.5	12.5	42.0	17.0		
	4995	PALE	4	S/F	0037.6	0041.5	8.0	94			
	8800	PALE	4	S/F	0037.6	0041.5	20.0	170			
	2695	LEAR	4	S/F	0037.8	0041.6	14.8	54			
	2695	PALE	4	S/F	0038.0	0041.5	8.3	48			
	1000	TYKW	45	C	0038.0	0038.3	9.0	47.0	3.0		
	15400	PALE	4	S/F	0038.1	0041.6	26.7	100			
	1415	PALE	4	S/F	0038.6	0041.3	5.0	34			
	35000	NAGO	20	GRF	0039.0	0039	39.0	27.0			
	1000	TYKW	29	PBI	0047.0		35.0	2.5	1.0		
	2000	TYKW	30	PBI	0050.0		125.0	9.0	5.0		
	2695	PENT	29	PBI	0052.0	0052	60.0D	11.8			
	3750	TYKW	30	PBI	0100.0		125.0	11.0	6.0		
	9400	TYKW	30	PBI	0110.0		120.0	15.0	6.0		
	1000	TYKW	32	ABS	0155.0	0350	147.0	-4.0	-2.0		
	3750	TYKW	5	S	0244.0	0246 U	10.0	4.0	2.0D		
	2000	TYKW	5	S	0253.3	0253.5	.5	3.5	1.5		
	2000	TYKW	31	ABS	0255.0	0345	86.0	-7.0	-4.0		
	3750	TYKW	31	ABS	0305.0	0345	75.0	-9.0	-5.0		
	9400	TYKW	31	ABS	0310.0	0345	62.0	-7.0	-4.0		
	2950	GORK	1	S	0327.5	0327.8	2.5	17.0	8.0		
	2950	GORK	22	GRF	0341.4	0353.4	378.0	30.0			
	9400	TYKW	5	S	0357.4	0357.8	2.5	4.0	1.5		
	3750	TYKW	5	S	0357.4	0357.8	2.0	7.0	1.5		
	2000	TYKW	5	S	0357.5	0357.8	1.0	13.0	3.5		
	3750	TYKW	28	PRE	0409.0	0413	11.0	6.0	4.0		
	2840	PEKG	3	S	0409.0	0423.6	7.0	29.0	13.0		
	15000	KISV	3	S	0410.0	0430	40.0	22.0			
	9100	GORK	20	GRF	0410.1	0424.0	52.0	25.0			
	9400	TYKW	28	PRE	0411.0	0412.7	9.0	14.0	4.0		
	2000	TYKW	28	PRE	0411.0	0413	9.0	1.5	1.0		
	4995	LEAR	8	S	0411.8	0412.6	.2	13			
	8800	LEAR	8	S	0411.8	0413.0	1.3	19			
	8800	LEAR	8	S	0416.6	0417.3	.2	11			
	9395	PEKG	20	GRF	0418.0	0423.5	32.0	17.0	11.0		
	4995	ATHN	4	S/F	0418.8	0423.6	7.2	30			
	200	HIRA	27	RF	0419.2	0443.7	50.0	5.0	3.0		WL
	15400	LEAR	47	GB	0419.8	0431.1	21.0	22			
	1415	LEAR	4	S/F	0419.8	0424.1	4.5	15			
	2695	LEAR	47	GB	0419.8	0423.3	14.0	31			
	4995	LEAR	47	GB	0419.8	0423.6	26.8	40			
	8800	LEAR	47	GB	0419.8	0429.0	32.5	37			
	2695	ATHN	4	S/F	0420.6	0424.1	6.1D	24			
	6100	KISV	21	GRF	0420.0	0424	40.0	19.0			
	2000	TYKW	45	C	0420.0	0423.3	6.0	20.0	11.0		
	3750	TYKW	45	C	0420.0	0423.4	30.0	38.0	15.0		
	9400	TYKW	45	C	0420.0	0424.0	35.0	29.0	15.0		
	650	GORK	22	GRF	0421.0	0423.0	24.0	10.5			
	1000	TYKW	45	C	0421.6	0423.0	19.0	18.0	3.0		
	1415	ATHN	4	S/F	0421.5	0423.8	4.3D	11			
	500	HIRA	22	GRF	0421.6	0453.4	94.0	6.0	3.0		MR
	4995	MANI	3	S	0421.8	0424.4	5.0	29.7	9.9		
	1415	MANI	1	S	0422.0	0425.2	5.2	9.1	3.0		
	606	MANI	3	S	0422.0	0424.2	5.3	19.6	6.5		
	2695	MANI	3	S	0422.2	0424.7	4.5	24.0	8.0		
	245	PALE	4	S/F	0422.3	0426.1	5.5	68			
	4995	PALE	4	S/F	0422.5	0423.0	3.3	40			
	2695	PALE	4	S/F	0422.5	0423.0	3.3	34			
	15400	PALE	4	S/F	0422.8	0423.0	3.7	54			
	8800	PALE	4	S/F	0422.8	0423.0	3.0	31			
	1415	PALE	4	S/F	0422.8	0423.5	3.0	16			
	228	HARS	45	C	0425.4	0426.1	3.1	270.0	750.0		
	245	LEAR	8	S	0425.6	0426.1	1.7	130			
	2000	TYKW	29	PBI	0426.0		34.0	8.0	4.0		
	2840	PEKG	29	PBI	0426.0		74.0	10.0	4.2		
	245	LEAR	8	S	0440.3	0440.3	.2	20			
	3750	TYKW	29	PBI	0450.0		20.0	7.0	3.0		
	9400	TYKW	29	PBI	0455.0		35.0	5.0	2.5		
	9395	PEKG	1	S	0611.0	0626	34.0	11.0	4.0		
	2840	PEKG	5	S	0620.0	0625	14.0	6.0	3.0		
	3750	TYKW	5	S	0623.5	0624.2	1.5	6.0	2.0		
	2000	TYKW	5	S	0623.5	0624.2	1.5	3.0	1.5		
	950	GORK	20	GRF	0821.2	0822.8	116.4	18.0	9.0		
	2695	PENT	27A	RF	1100.0		445.0	4.0	3.8		
	2800	OTTA	24	R	1100.0	1110	10.0	4.0	1.4		
	2950	GORK	22	GRF	1103.6	1111.2	60.0E	6.8			
	2800	OTTA	24P	R	1110.0		400.0	4.0			
	7000	SAOP	3	S	1217.6	1218.1	1.3	17.0	8.0		E

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

JUNE 1981

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
					UT	UT	MINUTES	PEAK	MEAN		
29	228	HARS	7	C	1257.5	1258.8	2.5	140.0	45.0		
	606	SGMR	4	S/F	1536.5	1544.8	15.6D	50			
	2800	OTTA	22	GRF	1540.0	1640	120.0	8.6	4.8		
	1415	SGMR	4	S/F	1543.5	1548.6	8.6	11			
	2800	OTTA	26	FAL	1750.6	1825	35.0	-4.0	-2.0		
	410	PALE	47	GB	1954.6	1955.0	18.7	49			
	245	PALE	47	GB	1954.6	1954.8	.5	360			
	2695	PENT	3	S	2000.0	2001.2	4.0	25.0	9.0		
	8800	PALE	4	S/F	2000.1	2001.1	6.0	110			
	4995	PALE	4	S/F	2000.6	2001.3	2.2	81			
	7000	SAOP	4	S/F	2000.8	2001.1	1.0	75.0	37.0		6L
	2695	PALE	8	S	2001.0	2001.3	.6	27			
	15400	PALE	8	S	2001.1	2001.3	.4	37			
	2695	PENT	29	PBI	2004.0	2004	9.0	3.4	1.7		
	2800	OTTA	20	GRF	2110.0	2140	60.0	3.2	1.6		
	3750	TYKW	20	GRF	2345.0	0008	35.0	3.0	1.5		
30	260	ØNDR	44	NS	0546.0E		504.0D	84.0	5.0		
	127	TORN	43	NS	0900.0		420.0D		1.0		V0
	245	SGMR	43	NS	1620.0	1713.6	100.0D	42			
	245	PALE	43	NS	1631.0	2259.0	732.0D	150			
	208	VORO	44	NS	2100.0E		240.0D		8.0		
	2000	TYKW	20	GRF	0050.0	0155	100.0	2.0	.7		
	3750	TYKW	21	GRF	0050.0	0155	100.0	4.0	1.5		
	1000	TYKW	45	C	0211.0U	0223	20.0U	2.0	1.0		INTERFERENCE
	3750	TYKW	5	S	0224.0	0224.4	1.0	1.5	.5		
	9400	TYKW	5	S	0224.0	0224.3	1.0	4.0	1.5		
	2000	TYKW	20	GRF	0250.0	0320	70.0	1.5	.7		
	1000	TYKW	45	C	0250.0	0319.3	90.0	5.0	1.5		
	3750	TYKW	20	GRF	0250.0	0320	80.0	4.0	2.0		
	9400	TYKW	20	GRF	0300.6	0320	70.0	3.0	1.5		
	3750	TYKW	21	GRF	0520.0	0700	200.0	6.0	3.0		
	9400	TYKW	21	GRF	0520.0	0646	100.0D	10.0	4.0D		RAIN
	2000	TYKW	21	GRF	0520.0	0700	180.0	3.0	1.5		
	5730	IRKU	2	S	0618.0	0623.3	7.0	48.0			L
	4995	ATHN	4	S/F	0618.6	0621.8	6.7	29			
	3200	BERN	3	S	0619.0	0621.8	6.0	19.0			
	5200	BERN	3	S	0619.0	0621.7	6.0	42.0			
	3750	TYKW	45	C	0619.0	0621.8	7.0	20.0	6.0		
	9395	PEKG	2	S/F	0619.0	0621.8	5.0	20.1	6.0		
	3100	CRIM	1	S	0619.0	0621.8	5.0	13.0	4.0		
	2840	PEKG	5	S	0619.0	0622.2	6.0	13.2	3.1		
	2950	GORK	1	S	0619.5	0622.0	4.2	13.0	6.5		
	2695	ATHN	4	S/F	0619.5	0622.1	4.6D	13			
	8400	BERN	3	S	0620.0	0621.8	6.0	33.0			
	4995	MANI	3	S	0620.0	0622.3	5.3	44.9	15.0		
	2000	TYKW	5	S	0620.0	0622	4.0	4.0	1.5		
	9400	TYKW	5	S	0620.0	0621.7	5.0D	25.0	8.0D		RAIN
	2650	DWIN	1	S	0620.0	0621	3.0	10.0	5.0		
	9100	GORK	1	S	0620.1	0621.9	6.0	26.0			
	2695	MANI	3	S	0620.5	0622.6	3.5	11.8	3.9		
	11800	BERN	3	S	0620.5	0622.0	6.0	14.0			
	4995	LEAR	8	S	0620.6	0621.6	1.9	34			
	8800	MANI	3	S	0621.5	0622.3	2.5	30.9	10.3		
	8800	LEAR	8	S	0621.6	0621.8	.5	28			
	2695	LEAR	8	S	0621.6	0622.1	.2	15			
	2000	TYKW	5	S	0643.0	0646.5	15.0	3.0	1.5		
	3750	TYKW	5	S	0644.6	0650	15.0	4.0	2.0		
	2840	PEKG	1	S	0732.0	0732.9	2.5	7.0	5.0		
	3200	BERN	1	S	0732.7	0733.7	3.0	10.0			
	5200	BERN	3	S	0732.7	0733.6	3.0	18.0			
	8400	BERN	3	S	0733.0	0733.6	3.0	14.0			
	3750	TYKW	5	S	0733.0	0733.7	2.0	10.0	3.0		
	33	UPIC	4	S/F	0733.0	0733.1	.6				
	29	UPIC	4	S/F	0733.2	0733.6	.6				
	2950	GORK	2	S/F	0733.3	0734.0	1.1	7.5			
	8800	LEAR	8	S	0733.3	0733.5	.2	15			
	4995	LEAR	8	S	0733.3	0733.5	.2	15			
	3100	CRIM	26	FAL	0846.0	0936.0		6.0			
	536	ØNDR	41	F	1323.5	1338.1	26.0	39.0	27.0		
	606	SGMR	4	S/F	1323.8	1336.3	34.2	130			
	410	SGMR	4	S/F	1329.1	1338.6	18.7D	20			
	245	SGMR	8	S	1428.0	1429.0	1.1D	29			
	1415	SGMR	8	S	1428.0	1429.0	1.1	18			
	245	SGMR	8	S	1439.1	1439.5	.5D	20			
	1415	SGMR	8	S	1439.1	1439.3	.5	25			
	2800	OTTA	260	FAL	1620.0	1640	20.0	3.2			
	2800	OTTA	32	ABS	1730.0	1905	230.0	-7.2	-3.0		
	2000	TYKW	5	S	2340.0	2342.0	4.0	5.0	2.0		
	3750	TYKW	5	S	2340.0	2341.8	5.0	12.0	4.0D		
	2695	PENT	1	S	2340.5	2342	5.0	9.0	4.0		
	3750	TYKW	29	PBI	2345.0		40.0	2.0	1.0		

Reports are received routinely from the following observatories:

ATHN = Athens	HIRA = Hiraiso	LEAR = Learmonth	PALE = Palehua	SYDN = Sydney
BERN = Berne	HUAN = Huancayo	MANI = Manila	PEKG = Peking	TORN = Torun
BORD = Bordeaux	IRKU = Irkutsk	NAGO = Nagoya	PENT = Penticton	TYKW = Toyokawa
CRIM = Crimea	IZMI = Izmiran	NOBE = Nobeyama	POTS = Potsdam	YUNN = Yunnan
DWIN = Dwingeloo	KISV = Kislovodsk	ONDR = Ondrejov	SAOP = Sao Paulo	TRST = Trieste
GORK = Gorky	KRAK = Krakow	OTTA = Ottawa	SGMR = Sagamore Hill	UPIC = Upice
HARS = Harestua				VORD = Voroshilov

Explanation of Type Code:

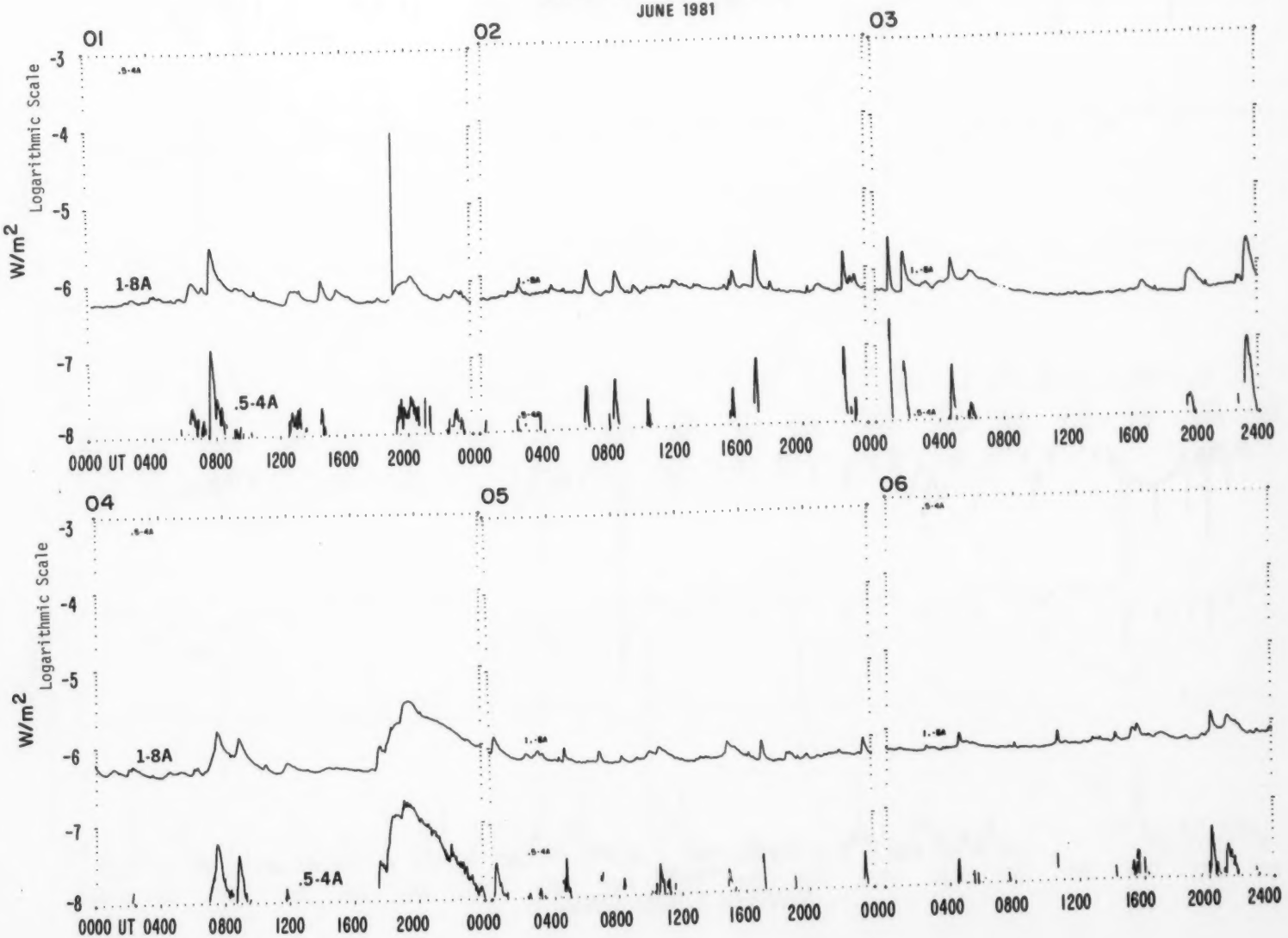
1 Simple 1	6 Minor	22 Simple 3F	27 Rise and Fall	32 Absorption	44 Noise Storm in Progress
2 Simple 1F	7 Minor +	23 Simple 3AF	28 Precursor	40 Fluctuation	45 Complex
3 Simple 2	8 Spike	24 Rise	29 Post Burst Increase	41 Group of Bursts	46 Complex F
4 Simple 2F	20 Simple 3	25 Rise A	30 Post Burst Increase A	42 Series of Bursts	47 Great Burst
5 Simple	21 Simple 3A	26 Fall	31 Post Burst Decrease	43 Onset of Noise Storm	48 Major
					49 Major +

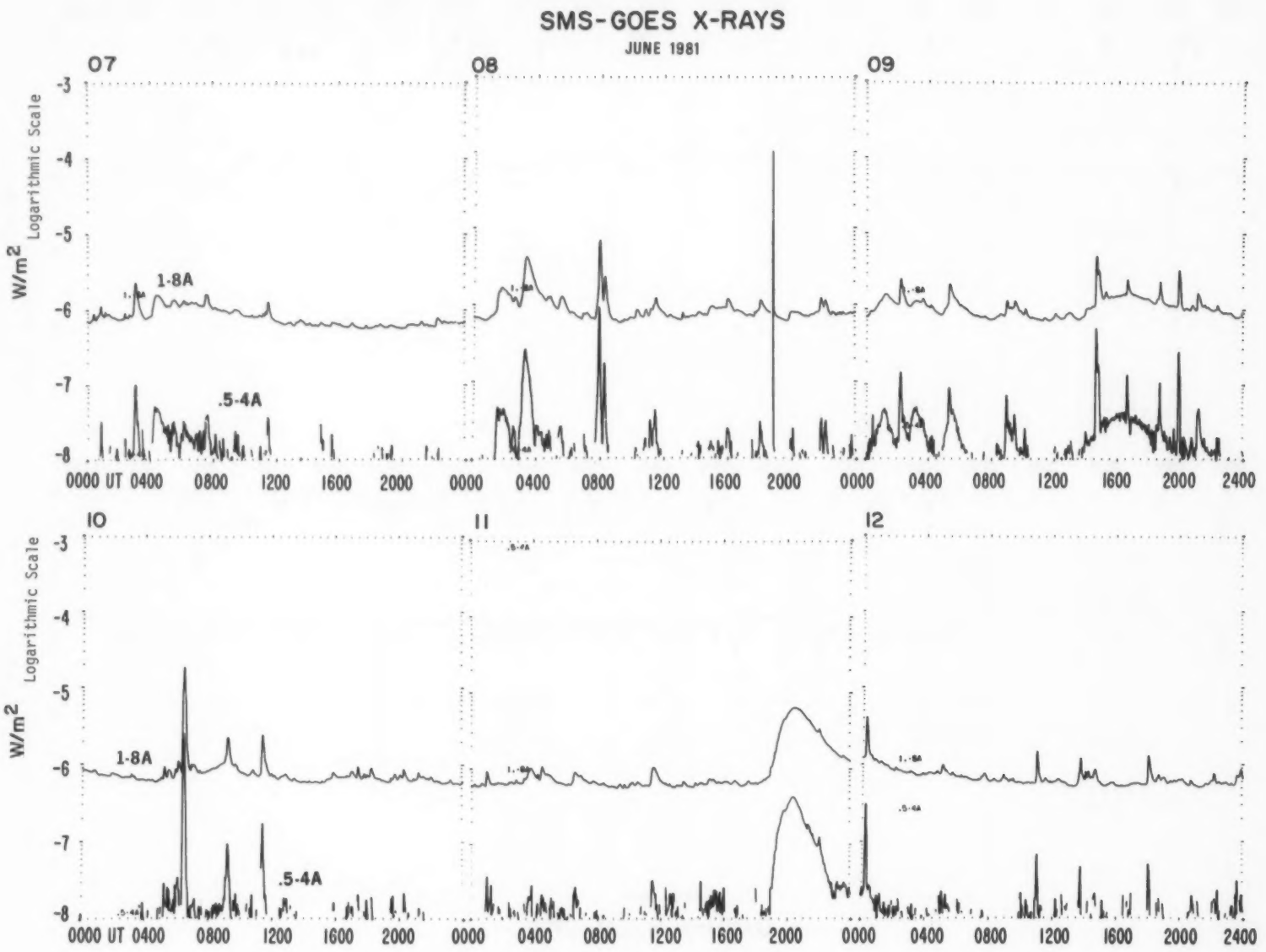
1A Simple 1A	2A Simple 1AF	240 Rise only	26A Fall A	27F Rise and Fall F	31A P.B. Decrease A
3A Simple 2A	4A Simple 2AF	240F Rise only F	260 Fall Only	27AF Rise and Fall AF	32A Absorption A
21A Simple 3A GRF		24P Post Rise	26F Fall F		46F Complex F
		24PF Post Rise F			

Under the "Remarks" column heading, RIF stands for Relative Increase in Flux. The expression "RIF 469.2", for example, denotes a flux increase of 469.2% above background.

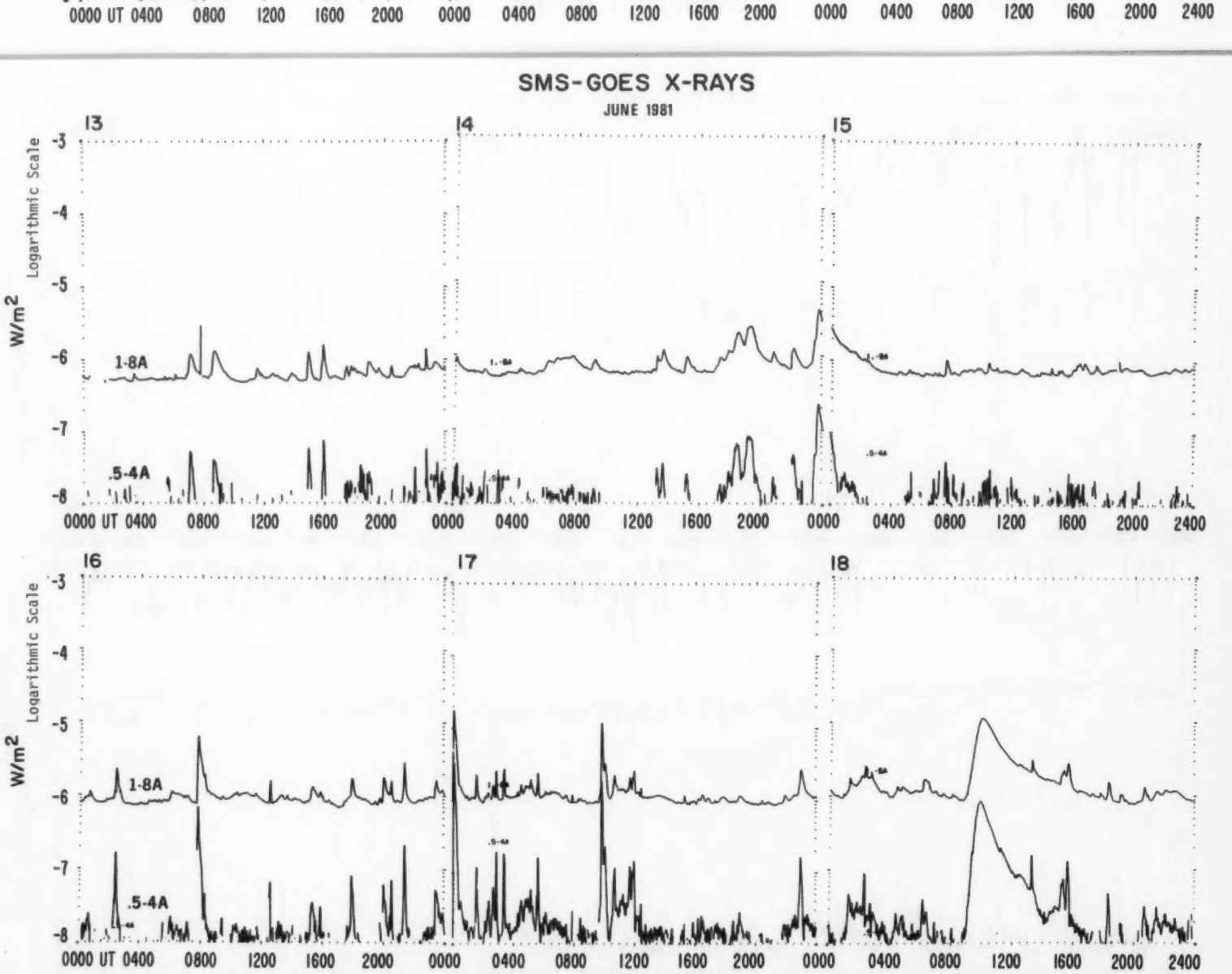
SMS-GOES X-RAYS

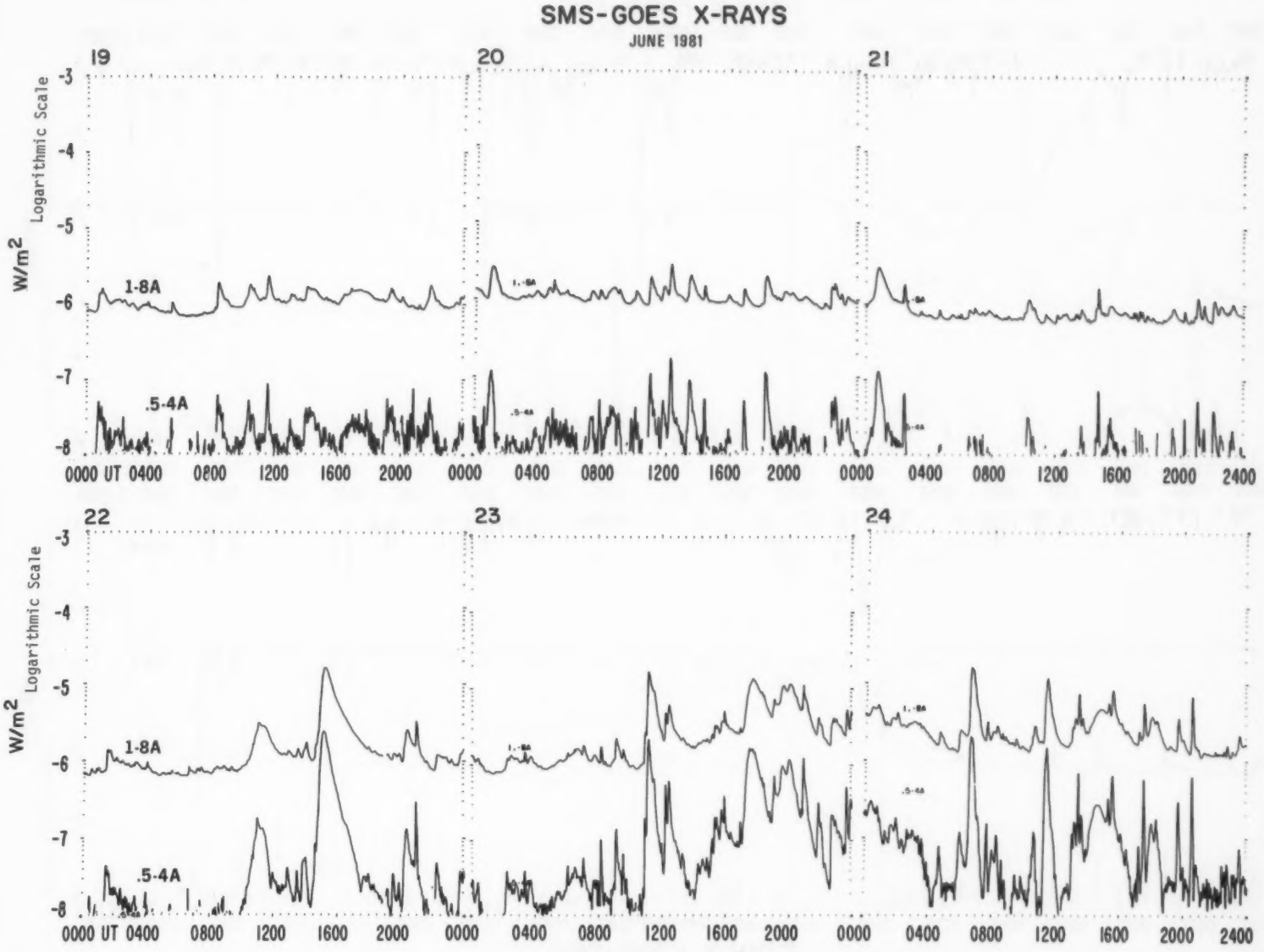
JUNE 1981



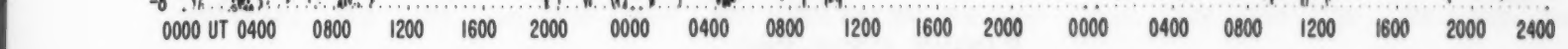


SMS-GOES X-RAYS
JUNE 1981


SMS-GOES X-RAYS
JUNE 1981
13
14
15
16
17
18
Logarithmic Scale
W/m2
-3
-4
-5
-6
-7
-8
1-8A
.5-4A
0000 UT 0400 0800 1200 1600 2000 0000 0400 0800 1200 1600 2000 0000 0400 0800 1200 1600 2000 2400

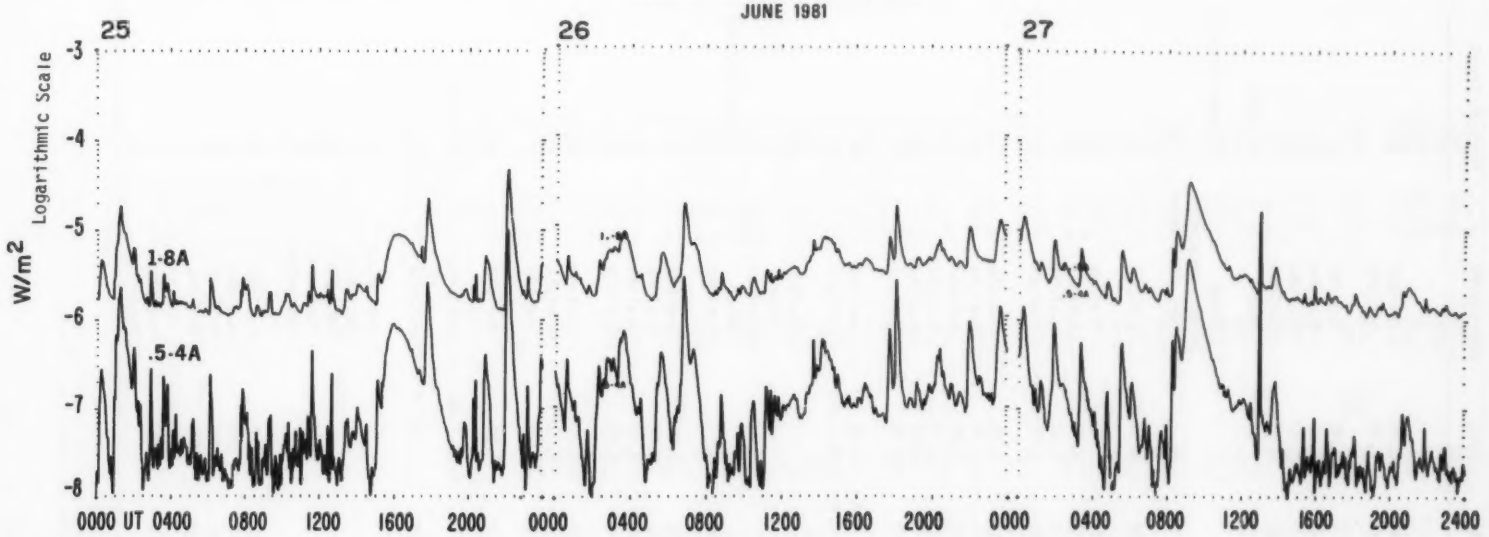


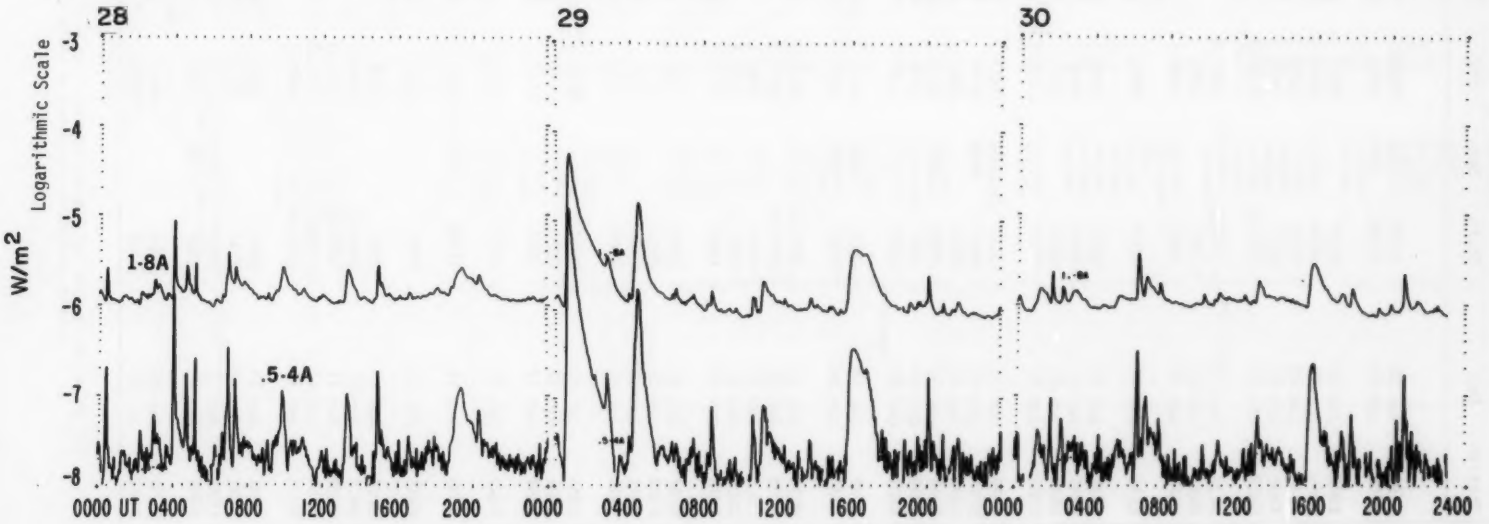
SMS-GOES X-RAYS



SMS-GOES X-RAYS

JUNE 1981





MASS EJECTIONS FROM THE SUN

June 1981

Station	Day	Observed UT Start	Max	End	Location RA°	R/R_o	Wavelength	Type of Event
GEOR	Jun 02	1157E	1206	1451U	NW	1.00	H-alpha	S
GEOR	Jun 02	1236E	1245	1452	NW	1.00	H-alpha	
KHAR	Jun 03	0830		0833	274	1.00	H-alpha	S
KHAR	Jun 03	0834		0840	268	1.00	H-alpha	S
KHAR	Jun 03	1040		1105	100	0.93	H-alpha	S
KHAR	Jun 03	1052		1102	106	0.88	H-alpha	S
CULG	Jun 03	2315.5		2322.5			Meter	II Weak
WEIS	Jun 04	1748.5		1807.9			30-86	II Herringbone
HARV	Jun 04	1757		1808			Meter; dekameter	II
HARV	Jun 04	1906		1920			Meter; dekameter	II
KHAR	Jun 06	0810		0940	260	0.97	H-alpha	S
KHAR	Jun 07	0810		0844	261	1.00	H-alpha	S
KHAR	Jun 07	0943		0955	135	0.32	H-alpha	S
KHAR	Jun 07	1020		1045	135	0.32	H-alpha	S
KHAR	Jun 07	1055		1110	261	1.00	H-alpha	S
KHAR	Jun 08	0540	0544	0620	116	1.00	H-alpha	S
KHAR	Jun 08	0620	0638	0755	070	0.95	H-alpha	S
KHAR	Jun 08	0802		0922	071	0.82	H-alpha	S
KHAR	Jun 08	0858	0900	0919	116	1.00	H-alpha	S
KHAR	Jun 08	1057		1108	077	0.83	H-alpha	S
KHAR	Jun 08	1140		1146	073	0.85	H-alpha	S
WEND	Jun 09	0855	0912	0933	110-120	1.05	H-alpha	A
KHAR	Jun 09	0855	0907	0918	114-118	1.00-1.03	H-alpha	S
WEIS	Jun 10	0624.9		0627.9			50-400	II
BLEN	Jun 10	0624.9		0628.8			Meter	II
CULG	Jun 10	0625		0640			Decimeter; meter	II
CULG	Jun 10	0631.5		0632.5			Meter	II Herringbone
KHAR	Jun 10	1010		1032	065	0.43	H-alpha	S
KHAR	Jun 11	0720		0937	109	1.00	H-alpha	S
KHAR	Jun 11	0913		0915	127	0.88	H-alpha	S
KHAR	Jun 11	0955		1013	060	0.40	H-alpha	S
KHAR	Jun 11	1045		1048	060	0.40	H-alpha	S
KHAR	Jun 12	0617		0620	138	0.82	H-alpha	S
KHAR	Jun 12	0621		0634	127	0.73	H-alpha	S
KHAR	Jun 12	1040		1057	112	0.94	H-alpha	S
KHAR	Jun 13	0932		0945	112	0.90	H-alpha	S
WEND	Jun 15	1248E	1305	1336	072	1.00-1.14	H-alpha	Q or SP
KHAR	Jun 16	0852		0905	130	0.54	H-alpha	S
DWIN	Jun 17	0947		0954			Decimeter	IV
DWIN	Jun 17	0959.5		1000.5			Decimeter	IV
DWIN	Jun 17	1024.0		1035.0			Decimeter	IV
DWIN	Jun 17	1139.5		1140.0			Decimeter	IV
DWIN	Jun 17	1151.3		1151.8			Decimeter	IV
KHAR	Jun 19	0825		0830	281	1.00	H-alpha	S
KHAR	Jun 19	0848		0857	285	1.00	H-alpha	S
KHAR	Jun 19	1014	1023	1047	281	1.00	H-alpha	S
KHAR	Jun 19	1014	1040	1100	285	1.00	H-alpha	S
KHAR	Jun 20	0902		0912	071	0.90	H-alpha	S
HARV	Jun 20	2116		2126			Meter	II

MASS EJECTIONS FROM THE SUN

June 1981

Station	Day	Observed UT Start	Max	End	Location RA°	R/R_o	Wavelength	Type of Event
CULG	Jun 21	0043		0112.5			Meter	II
LEAR	Jun 21	0047.6		0101.3			Meter	II
PALE	Jun 21	0049.5		0101.2			Meter	II
KHAR	Jun 21	0810		0840	075	0.78	H-alpha	S
KHAR	Jun 21	0810		0850	072	0.80	H-alpha	S
KHAR	Jun 21	1015		1025	075	0.78	H-alpha	S
KHAR	Jun 22	0634	0705	0755	066	1.00	H-alpha	SP
KHAR	Jun 22	0908	0920	0945	066	1.00	H-alpha	S
KHAR	Jun 23	0630		0655	066	1.00	H-alpha	S
KHAR	Jun 23	0645		0649	062	0.47	H-alpha	S
KHAR	Jun 23	0724		0732	066	1.00	H-alpha	S
KHAR	Jun 23	0744	0744	0800	066	1.00	H-alpha	S
KHAR	Jun 23	0842	0846	0956	068	1.00	H-alpha	S
KHAR	Jun 23	0952		0954	073	0.53-0.60	H-alpha	S
BLEN	Jun 23	1709.0		18150			Decimeter; meter	IV Pulsations
DWIN	Jun 23	1714		1752			Decimeter	IV
KHAR	Jun 24	0617	0634	0654	034	0.30	H-alpha	S
DWIN	Jun 24	0630		0700			Decimeter	IV
LEAR	Jun 24	0632.8		0931.0			Meter	IV
KHAR	Jun 24	0655	0700	0711	028	0.27	H-alpha	S
KHAR	Jun 24	0910	0914	0931	066	0.28	H-alpha	S
KHAR	Jun 24	0945	0953	1003	066	0.28	H-alpha	S
KHAR	Jun 24	1127	1136	1155	066	0.27	H-alpha	S
KHAR	Jun 24	1152	1152	1200	068	0.95	H-alpha	S
VORO	Jun 25	0105	0108	0111	315	0.26	H-alpha	S
KHAR	Jun 25	0608		0628	076	1.00	H-alpha	S
DWIN	Jun 26	0346		0357			Decimeter	IV
LEAR	Jun 26	2356.0		2358.5			Meter	II
KHAR	Jun 27	0630	0718	0755	107-111	0.77-0.58	H-alpha	A
KHAR	Jun 27	0830	0836	0854	055-060	0.72-0.68	H-alpha	SP
DWIN	Jun 27	0847		0936			Decimeter	IV
KHAR	Jun 27	0856		0859	286	0.50	H-alpha	S
WEIS	Jun 27	0906.1		0933.0			40-80	II Harmonic
KHAR	Jun 27	0921		0932	057	0.55	H-alpha	S
LEAR	Jun 27	0924.0		0928.5			Meter	II
KHAR	Jun 27	0950		1000	057	0.55	H-alpha	S
KHAR	Jun 27	0954		1112	052	0.58	H-alpha	S
KHAR	Jun 27	1020		1036	057	0.55	H-alpha	S
KHAR	Jun 27	1102		1114	106	0.48	H-alpha	S
KHAR	Jun 28	0623		0632	281	1.00	H-alpha	S
KHAR	Jun 28	0710		0717	286	0.69	H-alpha	S
KHAR	Jun 28	0732		0735	286	0.69	H-alpha	S
KHAR	Jun 28	0746		0750	286	0.69	H-alpha	S
KHAR	Jun 28	0803		0806	286	0.69	H-alpha	S
KHAR	Jun 28	0830	0850	0925	247	1.00	H-alpha	SP
KHAR	Jun 28	0914		0936	283	0.73	H-alpha	S
BLEN	Jun 29	0425.3		0428.8			Meter	II Herringbone
CULG	Jun 29	0426		0434.5			Meter	II
CULG	Jun 29	0449.5		0451			Meter	Possible II
KHAR	Jun 29	0625	0633	0712	014	0.33	H-alpha	SP
KHAR	Jun 29	0638		0658	122	0.75	H-alpha	S
KHAR	Jun 29	0808	0816	0859	067	0.68	H-alpha	S
KHAR	Jun 29	0842		0859	278	0.85	H-alpha	S
KHAR	Jun 29	1106	1109	1122	121	0.48	H-alpha	S
KHAR	Jun 30	1105		1110	168-178	0.17	H-alpha	S
KHAR	Jun 30	1142		1153	168-178	0.17	H-alpha	S

QUALIFIERS ON START, MAX AND END TIMES
D = event ended after the tabulated time
E = event began before the tabulated time
U = uncertain time

TYPE OF EVENT
A = eruptive active region prominence
CB = coronal cloud bubble
D = coronal depletions
E = coronal enhancement
EL = coronal expanding loop
II = Type II radio burst
IVm = moving Type IV radio burst
Q = eruptive quiescent prominence
R = coronal ray or streamer
S = flare-surge if there is a known flare association
SP = flare-spray if there is a known flare association

* = movement may be caused by ionospheric refraction

REPORTING STATIONS
BIGB = Big Bear
BLEN = Bleien
CULG = Culgoora
DWIN = Dwingeloo
GEOR = Georgiana
HALE = Haleakala
HAOC = High Altitude Observatory's SMM Coronagraph/Polarimeter
HAOK = High Altitude Observatory's MARK-III Coronameter at Mauna Loa
HARV = Harvard (Fort Davis)
LEAR = Learmonth
MANI = Manila
MITK = Mitaka
NRLC = Naval Research Laboratory's White-Light Coronagraph Experiment on P78-1
PALE = Palehua
SGMR = Sagamore Hill
TELV = Tel Aviv
WEIS = Weissenau
WEND = Wendelstein
UDAI = Udaipur

NOTE: Because only a small fraction of the data taken by satellite-borne coronagraph had been analyzed at the time this table was assembled, many events are defined solely by ground-based observatory reports.

SGD 448 Part II (Comprehensive)

MISCELLANEOUS DATA

Contents

	Page
Active Regions 1-29 May 1981	40
Synoptic Solar Maps 1- 29 May 1981	41
Solar Flares -- Intervals of No Flare Patrol Observation February 1980	42

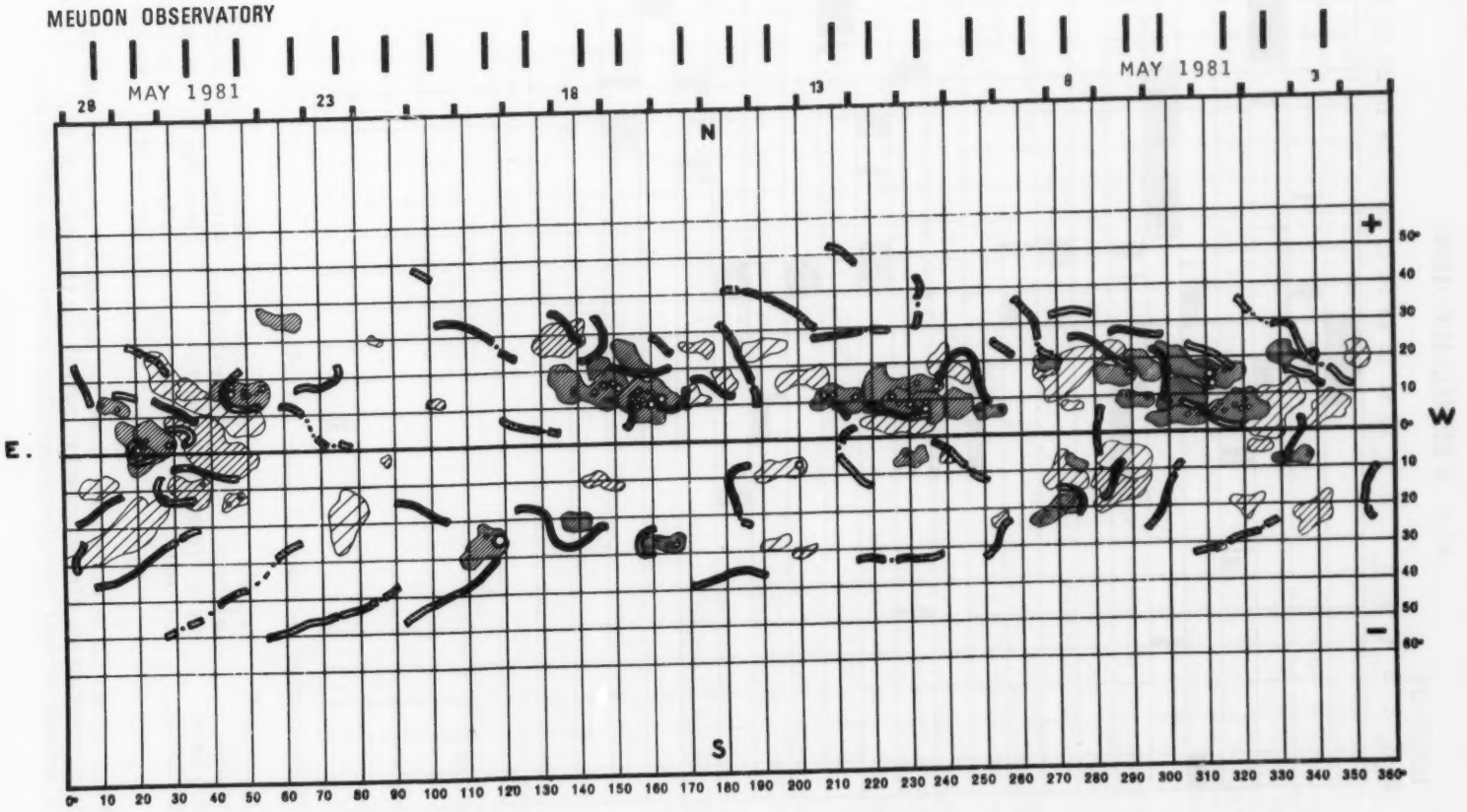
ACTIVE REGIONS
CARRINGTON ROTATION 1708
(May 1 to May 29, 1981)

Region No.	Coordinates Lat.	Coordinates Long.	IMP	Age at CMP	Spot-less Region	Region No. in Rotation 1707	Activity at West Limb
1	20°S	351	1	>6	x		dispersed
2	6°N	343	1	>6	x	3	decreasing
3	23°S	340	1	>6	x		dispersed
4	7°S	334	2	+4			decreasing
5	20°N	334	3	>6			decreasing
6	5°N	327	1	>6	x	6-8	decreasing
7	4°S	325	1	0	x		decreasing
8	20°S	321	1	>6	x		dispersed
9	7°N	318	4	>6			decreasing
10	15°N	314	3	+5			decreasing
11	18°N	304	3	>6			decreasing
12	4°N	303	2	>6			decreasing
13	10°N	303	1	>6	x		decreasing
14	19°N	293	1	>6	x	14	decreasing
15	9°N	292	2	+5			decreasing
16	14°S	287	1	>6	x		decreasing
17	16°N	286	3	>6			decreasing
18	19°N	277	1	>6	x		dispersed
19	8°S	275	1	+2	x		dispersed
20	7°N	274	1	>6	x		dispersed
21	11°S	272	1	>6	x		dispersed
22	21°S	269	3	>6			decreasing
23	19°N	268	2	0			decreasing
24	18°N	267	1	+2	x		disappeared
25	23°S	254	1	+3	x		decreasing
26	7°N	252	2	0			decreasing
27	9°N	243	1	>6	x		stable
28	19°N	241	1	>6	x		dispersed
29	6°S	240	1	>6	x		dispersed
30	9°N	232	6	>6			decreasing
31	6°S	231	2	>6			dispersed
32	12°N	229	2	>6		25	decreasing
33	4°N	227	1	>6	x		dispersed
34	12°N	211	3	>6			decreasing
35	17°N	201	1	>6	x		decreasing
36	30°S	201	1	0	x		decreasing
37	8°S	195	3	>6		35	decreasing
38	17°N	180	1	>6	x		dispersed
39	26°N	173	1	>6	x		decreasing
40	13°N	171	1	>6	x		dispersed
41	27°S	163	3	+2			decreasing
42	12°N	159	6	>6			decreasing
43	24°N	154	1	>6	x		decreasing
44	10°S	146	1	>6	x	48	decreasing
45	21°N	145	1	>6	x		decreasing
46	15°N	143	5	>6			decreasing
47	21°S	139	1	-5	x		?
48	29°N	135	1	>6	x	48	decreasing
49	27°S	114	4	>6			decreasing
50	12°N	101	1	0	x		dispersed
51	3°S	87	1	-3	x		decreasing
52	30°N	85	1	+1	x		disappeared
53	36°N	59	1	>6	x		decreasing
54	16°N	48	4	+3			decreasing
55	13°S	46	2	>6			decreasing
56	1°N	39	1	>6	x	64	decreasing
57	10°S	34	2	>6			dispersed
58	18°N	34	1	+5	x		decreasing
59	5°N	25	3	+1			decreasing
60	2°N	21	3	>6			decreasing
61	21°S	16	1	>6	x		dispersed
62	13°N	13	2	>6	x		decreasing

SYNOPTIC SOLAR MAP

CARRINGTON ROTATION 1708

MAY 1 - 29, 1981

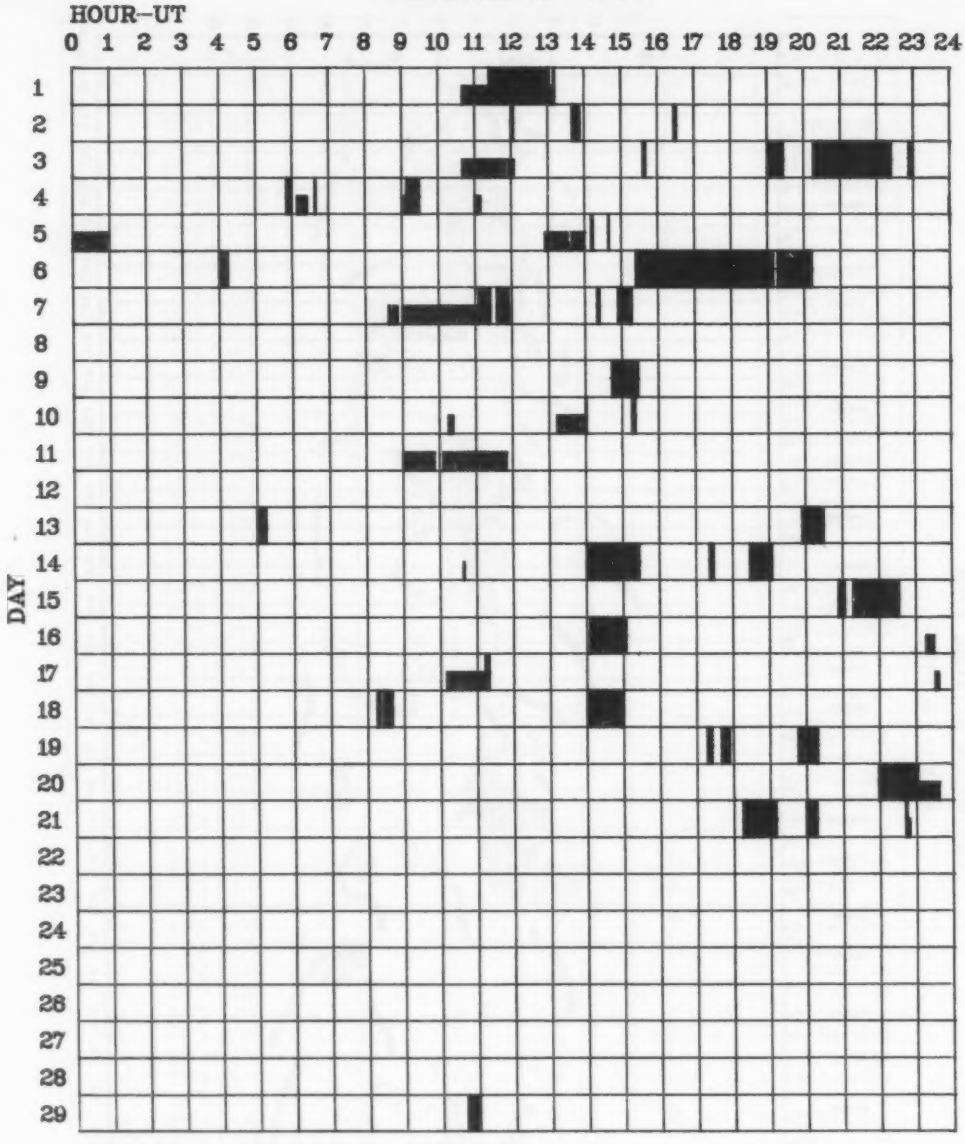


41
Misc
May 81

INTERVALS OF NO FLARE PATROL OBSERVATION

FOR PRECEDING SOLAR FLARE TABLE

FEBRUARY 1980



Observatories included in total patrol:

Abastumani	Catania	Huancayo	Manila	Ramey
Athens	Culgoora	Kanzelhoehe	Mitaka	Tashkent
Big Bear	Haute Provence	Kharkov	Monte Mario	Voroshilov
Bucharest	Holloman	Lvov	Palehua	Wendelstein
			Purple Mt.	Yunnan

Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

SOME OTHER SOURCES OF DATA

Data Available: Some data available in publication form are cited here. A list is given, along with addresses of the responsible institutions. The WDC-A for Solar-Terrestrial Physics publishes the Toyokawa, Ottawa and Penticton radio data in its monthly publication, *Solar-Geophysical Data*. The WDC-A for Solar-Terrestrial Physics also receives most of the periodicals when they become available.

Belgium: *Bulletin d'Observations: Activite Solaire - Observations Radioelectriques Solaires - 600 MHz (Humain, Belgium)* Observatoire Royal de Belgique, Ave. Circulaire 3, Brussels, Belgium (monthly since 1962)

Canada: *Solar Noise Observations at 2800 Mc/s (Ottawa - ARO) and 2700 Mc/s (Penticton - DRAO)* Series C Monthly Report, National Research Council, Radio Astronomy Section Ottawa 7, Ontario, Canada (since 1947)

France: *Carte Synoptiques de la Chromosphere Solaire* Observatoire de Paris, 92 Meudon, France (monthly since 1931)

Germany: *Daily Mean Value of Solar Flux Density* Heinrich-Hertz Institut, 1199 Berlin-Adlershof, Rudower Chaussee 5, G.D.R. (monthly since Jul 1957)

Italy: *Solar Phenomena - Monthly Bulletin and Photographic Supplement* Osservatorio Astronomica di Roma, Monte Mario, Rome, Italy (monthly since 1958); *Osservazion Solari, Solar Flux and Distinctive Events* Osservatorio Astronomico Di Trieste (quarterly since 1965); *Solar Observations made at Catania Astrophysical Observatory* (annually since 1967)

Japan: *Monthly Report of Solar Radio Emission* Radio Astronomy Section, Research Institute of Atmospherics, Nagoya University, Toyokawa, Japan (since 1956); *Solar Activity Chart* WDC-C2, Toyokawa Observatory, Nagoya University, Toyokawa, Japan (annually since 1968); *IAU Quarterly Bulletin on Solar Activity* Tokyo Astronomical Observatory, Mitaka, Tokyo, Japan (since 1978)

Netherlands: *Geomagnetic Data* IAGA Bulletin No. 12 (1932-69), No. 32 (since 1970) IUGG Publications Office, 39 ter, Rue Gay-Lussac, Paris V, France (annually)

Philippines: Manila Observatory "Solar Maps and Activity", Manila Observatory, P.O. Box 1231, Manila, Philippines (monthly)

Switzerland: Bulletin of "Berne Solar Observations", Institute of Applied Physics, Div. of Solar Observations, Sidlerstrasse 5, 3012 Berne, Switzerland (since 1968)

Taiwan: *Report on Sunspot Observations* Taiwan Provincial Weather Bureau Observatory, Taipei, Taiwan (quarterly since 1957)

USSR: СОЛНЕЧНЫЕ ДАННЫЕ *(Solar Data)* USSR Academy of Science (monthly since 1958); КОСМИЧЕСКИЕ ДАННЫЕ *(Cosmic Data)* (monthly since 1962); *Magnetic Fields of Sunspots* (bimonthly since 1964)

USA: *Preliminary Report and Forecast of Solar-Geophysical Activity* Space Environment Services Center, NOAA, Boulder, Colorado 80303 USA (weekly); *Solar-Geophysical Data* NOAA, Boulder, Colorado 80303 USA (monthly since November 1955)

UAG SERIES OF REPORTS

Between 4 and 12 UAG Reports are published at irregular intervals each year. Subscriptions may be ordered through the National Geophysical and Solar-Terrestrial Data Center, Environmental Data and Information Service, NOAA, Boulder, CO 80303, USA. The subscription price for the calendar year only is $40.00 ($23.00 additional for foreign mailing). Each year the single copy prices total less than $40.00, the expiration date for all subscriptions will be extended. Back issues may be purchased at the prices shown below plus a $4.00 handling charge per order; some reports, though, are available only on microfiche. Orders must include check or money order payable in U.S. currency to the Department of Commerce, NOAA/NGSDC.

UAG-1 "IQSY Night Airglow Data," by L.L. Smith, F.E. Roach, and J.M. McKennan, ESSA Aeronomy Laboratory, Boulder, CO, July 1968, 305 pp, $1.75.

UAG-2 "A Reevaluation of Solar Flares, 1964-1966," by Helen W. Dodson and E. Ruth Hedeman, McMath-Hulbert Observatory, University of Michigan, Pontiac, MI, August 1968, 28 pp, $0.30.

UAG-3 "Observations of Jupiter's Sporadic Radio Emission in the Range 7.6-41 MHz, 6 July 1966 through 8 September 1968," by James W. Warwick and George A. Dulk, University of Colorado, Boulder, CO, October 1968, 35 pp, $0.55.

UAG-4 "Abbreviated Calendar Record 1966-1967," by J. Virginia Lincoln, Hope I. Leighton and Dorothy K. Kropp, ESSA now NOAA, Aeronomy and Space Data Center, Boulder, CO, January 1969, 170 pp, $1.25.

UAG-5 "Data on Solar Event of May 23, 1967 and its Geophysical Effects," compiled by J. Virginia Lincoln, World Data Center A, Upper Atmosphere Geophysics, ESSA now NOAA, Boulder, CO, February 1969, 120 pp, $0.65.

UAG-6 "International Geophysical Calendars 1957-1969," by A.H. Shapley and J. Virginia Lincoln, ESSA Research Laboratories, now NOAA, Boulder, CO, March 1969, 25 pp, $0.30.

UAG-7 "Observations of the Solar Electron Corona: February 1964 - January 1968," by Richard T. Hansen, High Altitude Observatory, NCAR, Boulder, CO, and Kamuela, HI, October 1969, 12 pp, $0.15.

UAG-8 "Data on Solar-Geophysical Activity October 24 - November 6, 1968," Parts 1 and 2, compiled by J. Virginia Lincoln, World Data Center A, Upper Atmosphere Geophysics, ESSA now NOAA, Boulder, CO, March 1970, 312 pp, $1.75 (includes Parts 1 and 2).

UAG-9 "Data on Cosmic Ray Event of November 18, 1968 and Associated Phenomena," compiled by J. Virginia Lincoln, World Data Center A, Upper Atmosphere Geophysics, ESSA now NOAA, Boulder, CO, April 1970, 109 pp, $0.55.

UAG-10 "Atlas of Ionograms," edited by A.H. Shapley, ESSA Research Laboratories now NOAA, Boulder, CO, May 1970, 243 pp, $1.50.

UAG-12 "Solar-Geophysical Activity Associated with the Major Geomagnetic Storm of March 8, 1970," Parts 1, 2 and 3, compiled by J. Virginia Lincoln and Dale B. Bucknam, World Data Center A, Upper Atmosphere Geophysics, ESSA now NOAA, Boulder, CO, April 1971, 466 pp, $3.00 (includes Parts 1-3).

UAG-13 "Data on the Solar Proton Event of November 2, 1969 through the Geomagnetic Storm of November 8-10, 1969," compiled by Dale B. Bucknam and J. Virginia Lincoln, World Data Center A, Upper Atmosphere Geophysics, ESSA now NOAA, Boulder, CO, May 1971, 76 pp, $0.90.

UAG-14 "An Experimental, Comprehensive Flare Index and Its Derivation for 'Major" Flares, 1955-1969," by Helen W. Dodson and E. Ruth Hedeman, McMath-Hulbert Observatory, University of Michigan, Pontiac, MI, July 1971, 25 pp, $0.30.

UAG-16 "Temporal Development of the Geophysical Distribution of Auroral Absprption for 30 Substorm Events in each of IQSY (1964-65) and IASY (1960)," by F.T. Berkey, University of Alaska, Fairbanks, AK; V.M. Driatskiy, Arctic and Antarctic Research Institute, Leningrad, USSR; K. Henriksen, Auroral Observatory, Tromson, Norway; D.H. Jelly, Communications Research Center, Ottawa, Canada; T.I. Shchuka, Arctic and Antarctic Research Institute, Leningrad, USSR; A. Theander, Kiruna Geophysical Observatory, Kiruna, Sweden; and J. Yliniemi, University of Oulu, Oulu, Finland, September 1971, 131 pp, $0.70 (microfiche only).

UAG-17 "Ionospheric Drift Velocity Measurements at Jicamarca, Peru (July 1967 - March 1970)," by Ben B. Balsley, NOAA Aeronomy Laboratory, Boulder, CO, and Ronald F. Woodman, Jicamarca Radar Observatory, Instituto Geofisico del Peru, Lima, Peru, October 1971, 45 pp, $0.55 (microfiche only).

UAG-18 "A Study of Polar Cap and Auroral Zone Magnetic Variations," by K. Kawasaki and S.-I. Asasofu, University of Alaska, Fairbanks, AK, June 1972, 21 pp, $0.20.

UAG-19 "Reevaluation of Solar Flares 1967," by Helen W. Dodson and E. Ruth Hedeman, McMath-Hulbert Observatory, University of Michigan, Pontiac, MI, and Marta Rovira de Miceli, San Miguel Observatory, Argentina, June 1972, 15 pp, $0.15.

UAG-21 "Preliminary Compilation of Data for Retrospective World Interval July 26 - August 14, 1972," by J. Virginia Lincoln and Hope I. Leighton, World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, CO, November 1972, 128 pp, $0.70.

UAG-22 "Auroral Electrojet Magnetic Activity Indices (AE) for 1970," by Joe Haskell Allen, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, November 1972, 146 pp, $0.75.

UAG-23 "U.R.S.I. Handbook of Ionogram Interpretation and Reduction," Second Edition, November 1972, edited by W.R. Piggott, Radio and Space Research Station, Slough, UK, and K. Rawer, Arbeitsgruppe fur Physikalische Weltraumforschung, Freiburg, GFR, November 1972, 324 pp, $1.75.

UAG-23A "U.R.S.I. Handbook of Ionogram Interpretation and Reduction," Second Edition, Revision of Chapters 1-4, edited by W.R. Piggott, Radio and Space Research Station, Slough, UK, and K. Rawer, Arbeitsgruppe fur Physikalische Weltraumforschung, Freiburg, GFR, November 1972, 135 pp, $2.14.

UAG-24 "Data on Solar-Geophysical Activity Associated with the Major Ground Level Cosmic Ray Events of 24 January and 1 September 1971," Parts 1 and 2, compiled by Helen E. Coffey and J. Virginia Lincoln, World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, CO, December 1972, 462 pp, $2.00 (includes Parts 1 and 2).

UAG-25 "Observations of Jupiter's Sporadic Radio Emission in the Range 7.6-41 MHz, 9 September 1968 through 9 December 1971," by James W. Warwick, George A. Dulk and David G. Swann, University of Colorado, Boulder, CO, February 1973, 35 pp, $0.35.

UAG-26 "Data Compilation for the Magnetospherically Quiet Periods February 19-23 and November 29 - December 3, 1970," compiled by Helen E. Coffey and J. Virginia Lincoln, World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, CO, May 1973, 129 pp, $0.70.

UAG-27 "High Speed Streams in the Solar Wind," by D.S. Intriligator, University of Southern California, Los Angeles, CA, June 1973, 16 pp, $0.15.

UAG-28 "Collected Data Reports on August 1972 Solar-Terrestrial Events," Parts 1, 2 and 3, edited by Helen E. Coffey, World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, CO, July 1973, 932 pp, $4.50.

UAG-29 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1968," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, October 1973, 148 pp, $0.75.

UAG-30 "Catalogue of Data on Solar-Terrestrial Physics," prepared by NOAA Environmental Data Service, Boulder, CO, October 1973, $1.50. Supersedes UAG-11, 15, and 20 catalogs.

UAG-31 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1969," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, February 1974, 142 pp, $0.75.

UAG-32 "Synoptic Radio Maps of the Sun at 3.3 mm for the Years 1967-1969," by Earle B. Mayfield, Kennon P. White III, and Fred I. Shimabukuro, Aerospace Corp., El Segundo, CA, April 1974, 26 pp, $0.35.

UAG-33 "Auroral Electrojet Magnetic Activity Indices AE(10) for 1967," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, May 1974, 142 pp, $0.75.

UAG-34 "Absorption Data for the IGY/IGC and IQSY," compiled and edited by A.H. Shapley, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO; W.R. Piggott, Appleton Laboratory, Slough, UK; and K. Rawer, Arbeitsgruppe fur Physikalische Weltraumforschung, Freiburg, GFR, June 1974, 381 pp, $2.00.

UAG-35 "Catalogue of Digital Geomagnetic Variation Data at World Data Center A for Solar-Terrestrial Physics," prepared by NOAA Environmental Data Service, Boulder, CO, July 1974, 20 pp, $0.20.

UAG-36 "An Atlas of Extreme Ultraviolet Flashes of Solar Flares Observed via Sudden Frequency Deviations During the ATM-SKYLAB Missions," by R.F. Donnelly and E.L. Berger, NOAA Space Environment Laboratory; Lt. J.D. Busman, NOAA Commissioned Corps; B. Henson, NASA Marshall Space Flight Center; T.B. Jones, University of Leicester, UK; G.M. Lerfald, NOAA Wave Propagation Laboratory; K. Najita, University of Hawaii; W.M. Retallack, NOAA Space Environment Laboratory and W.J. Wagner, Sacramento Peak Observatory, October 1974, 95 pp, $0.55.

UAG-37 "Auroral Electrojet Magnetic Activity Indices AE(10) for 1966," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, December 1974, 142 pp, $0.75.

UAG-38 "Master Station List for Solar-Terrestrial Physics Data at WDC-A for Solar-Terrestrial Physics," by R.W. Buhmann, World Data Center A for Solar-Terrestrial Physics, Boulder, CO; Juan D. Roederer, University of Denver, Denver, CO; and M.A. Shea and D.F. Smart, Air Force Cambridge Research Laboratories, Hanscom AFB, MA, December 1974, 110 pp, $1.60.

UAG-39 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1971," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, February 1975, 144 pp, $2.05.

UAG-40 "H-Alpha Synoptic Charts of Solar Activity for the Period of Skylab Observations, May 1973 - March 1974," by Patrick S. McIntosh, NOAA Space Environment Laboratory, Boulder, CO, February 1975, 32 pp, $0.56.

UAG-41 "H-Alpha Synoptic Charts of Solar Activity During the First Year of Solar Cycle 20 October 1964 - August 1965," by Patrick S. McIntosh, NOAA Space Environment Laboratory, Boulder, CO and Jerome T. Nolte, American Science and Engineering, Inc., Cambridge, MA, March 1975, 25 pp, $0.48.

UAG-42 "Observations of Jupiter's Sporadic Radio Emission in the Range 7.6-80 MHz, 10 December 1971 through 21 March 1975," by James W. Warwick, George A. Dulk and Anthony C. Riddle, University of Colorado, Boulder, CO, April 1975, 49 pp, $1.15.

UAG-43 "Catalog of Observation Times of Ground-Based Skylab-Coordinated Solar Observing Programs," compiled by Helen E. Coffey, World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, CO, May 1975, 159 pp, $3.00.

UAG-44 "Synoptic Maps of Solar 9.1 cm Microwave Emission from June 1962 to August 1973," by Werner Graf and Ronald N. Bracewell, Stanford University, Stanford, CA, May 1975, 183 pp, $2.55.

UAG-45 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1972," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, May 1975, 144 pp, $2.10 (microfiche only).

UAG-46 "Interplanetary Magnetic Field Data 1963-1964," by Joseph H. King, National Space Science Data Center, NASA Goddard Space Flight Center, Greenbelt, MD, June 1975, 382 pp, $1.95.

UAG-47 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1973," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, June 1975, 144 pp, $2.10 (microfiche only).

UAG-48A "Synoptic Observations of the Solar Corona during Carrington Rotations 1580-1596 (11 October 1971 - 15 January 1973)," [Reissue of UAG-48 with quality images], by R.A. Howard, M.J. Koomen, D.J. Michels, R. Tousey, C.R. Detwiler, D.E. Roberts, R.T. Seal, and J.D. Whitney, U.S. Naval Research Laboratory, Washington, DC, and R.T. Hansen and S.F. Hansen, C.J. Garcia and E. Yasukawa, High Altitude Observatory, NCAR, Boulder, CO, February 1976, 200 pp, $4.27.

UAG-49 "Catalog of Standard Geomagnetic Variation Data," prepared by NOAA Environmental Data Service, Boulder, CO, August 1975, 125 pp, $1.85.

UAG-50 "High-Latitude Supplement to the URSI Handbook on Ionogram Interpretation and Rediction," edited by W.R. Piggott, British Antarctic Survey, c/o Appleton Laboratory, Slough, UK, October 1975, 294 pp, $4.00.

UAG-51 "Synoptic Maps of Solar Coronal Hole Boundaries Derived from He II 304A Spectroheliograms from the Manned Skylab Missions," by J.D. Bohlin and D.M. Rubenstein, U.S. Naval Research Laboratory, Washington, DC, November 1975, 30 pp, $0.54.

UAG-52 "Experimental Comprehensive Solar Flare Indices for Certain Flares, 1970-1974," by Helen W. Dodson and E. Ruth Hedeman, McMath-Hulbert Observatory, University of Michigan Pontiac, MI, November 1975, 27 pp, $0.60.

UAG-53 "Description and Catalog of Ionospheric F-Region Data, Jicamarca Radio Observatory (November 1966 - April 1969), by W.L. Clark and T.E. Van Zandt, NOAA Aeronomy Laboratory, Boulder, CO, and J.P. McClure, University of Texas as Dallas, Dallas, TX, April 1976, 10 pp, $0.33.

UAG-54 "Catalog of Ionosphere Vertical Soundings Data," prepared by NOAA Environmental Data Service, Boulder, CO, April 1976, 130 pp, $2.10.

UAG-55 "Equivalent Ionospheric Current Representations by a New Method, Illustrated for 8-9 November 1969 Magnetic Disturbances," by Y. Kamide, Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder, CO; H.W. Kroehl, Data Studies Division, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO; M. Kanamitsu, Advanced Study Program, National Center for Atmospheric Research, Boulder, CO; Joe Haskell Allen, Data Studies Division, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO; and S.-I Akasofu, Geophysical Institute, University of Alaska, Fairbanks, AK, April 1976, 91 pp, $1.60 (microfiche only).

UAG-56 "Iso-intensity Contours of Ground Magnetic H Perturbations for the December 16-18, 1971, Geomagnetic Storm," Y. Kamide, Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder, CO, April 1976, 37 pp, $1.39.

UAG-57 "Manual on Ionospheric Absorption Measurements," edited by K. Rawer, Institut fur Physikalische Weltraumforschung, Freiburg, GFR, June 1976, 302 pp, $4.27.

UAG-58 "ATS6 Radio Beacon Electron Content Measurements at Boulder, July 1974 - May 1975," by R.B. Fritz, NOAA Space Environment Laboratory, Boulder, CO, September 1976, 61 pp, $1.04.

UAG-59 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1974," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, December 1976, 144 pp, $2.16.

UAG-60 "Geomagnetic Data for January 1976 (AE(7) Indices and Stacked Magnetograms)," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, July 1977, 57 pp, $1.07.

UAG-61 "Collected Data Reports for STIP Interval II 20 March - 5 May 1976, edited by Helen E. Coffey and John A. McKinnon, World Data Center A for Solar-Terrestrial Physics, Boulder, CO, August 1977, 313 pp, $2.95.

UAG-62 "Geomagnetic Data for February 1976 (AE(7) Indices and Stacked Magnetograms)," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, September 1977, 55 pp, $1.11.

UAG-63 "Geomagnetic Data for March 1976 (AE(7) Indices and Stacked Magnetograms)," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, September 1977, 57 pp, $1.11.

UAG-64 "Geomagnetic Data for April 1976 (AE(8) Indices and Stacked Magnetograms)," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, February 1978, 55 pp, $1.00.

UAG-65 "The Information Explosion and Its Consequences for Data Acquisition, Documentation, Processing," by G.K. Hartmann, Max-Planck-Institut fur Aeronomie, Lindau, GFR, May 1978, 36 pp, $0.75.

UAG-66 "Synoptic Radio Maps of the Sun at 3.3 mm 1970-1973," by Earle B. Mayfield and Fred I. Shimabukuro, Aerospace Corp., El Segundo, CA, May 1978, 30 pp, $0.75.

UAG-67 "Ionospheric D-Region Profile Data Base, A Collection of Computer-Accessible Experimental Profiles of the D and Lower E Regions," by L.F. McNamara, Ionospheric Prediction Service, Sydney, Australia, August 1978, 30 pp, $0.88 (microfiche only).

UAG-68 "A Comparative Study of Methods of Electron Density Profile Analysis," by L.F. McNamara, Ionospheric Prediction Service, Sydney, Australia, August 1978, 30 pp, $0.88 (microfiche only).

UAG-69 "Selected Disturbed D-Region Electron Density Profiles. Their relation to the undisturbed D region," by L.F. McNamara, Ionospheric Prediction Service, Sydney, Australia, October 1978, 50 pp, $1.29 (microfiche only).

UAG-70 "Annotated Atlas of the H-alpha Synoptic Charts for Solar Cycle 20 (1964-1974) Carrington Solar Rotations 1487-1616," by Patrick S. McIntosh, NOAA Space Environment Laboratory, Boulder, CO, February 1979, 327 pp, $3.50.

UAG-71 "Magnetic Potential Plots over the Northern Hemisphere for 26-28 March 1976," A.D. Richmond, NOAA Space Environment Laboratory, Boulder, CO; H.W. Kroehl, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO; M.A. Henning, Lockheed Missils and Space Co., Aurora, CO; and Y. Kamide, Kyoto Sangyo University, Kyoto, Japan, April 1979, 118 pp, $1.50.

UAG-72 "Energy Release in Solar Flares, Proceedings of the Workshop on Energy Release in Flares, 26 February - 1 March 1979, Cambridge, Massachusetts, U.S.A.," edited by David M. Rust, American Science and Engineering, Inc., Cambridge, MA, and A. Gordon Emslie, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA, July 1979, 68 pp, $1.50 (microfiche only).

UAG-73 "Auroral Electrojet Magnetic Activity Indices AE(11-12) for January - June 1975," by Joe Haskell Allen, Carl C. Abston, J.E. Salazar and J.A. McKinnon, National Geophysical and Solar-Terrestrial Data Center, NOAA, Boulder, CO, August 1979, 114 pp, $1.75.

UAG-74 "ATS-6 Radio Beacon Electron Content Measurements at Ootacamund, India, October - July 1976," by S.D. Bouwer, K. Davies, R.F. Donnelly, R.N. Grubb, J.E. Jones and J.H. Taylor, NOAA Space Environment Laboratory, Boulder, CO, and R.G. Rastogi, M.R. Deshpande, H. Chandra and G. Sethia, Physical Research Laboratory, Ahmedabad, India, March 1980, 58 pp, $2.50.

UAG-75 "The Alaska IMS Meridian Chain: Magnetic Variations for 9 March - 27 April 1978," by H.W. Kroehl and G.P. Kosinski, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO; S.-I Akasofu, G.J. Romick, C.E. Campbell and G.K. Corrick, University of Alaska, Fairbanks, AK; and C.E. Hornback and A.M. Gray, NOAA Space Environment Laboratory, Boulder, CO, June 1980, 107 pp, $3.00.

UAG-76 "Auroral Electrojet Magnetic Activity Indices AE(12) for July - December 1975," by Joe Haskell Allen, Carl C. Abston, J.E. Salazar and J.A. McKinnon, National Geophysical and Solar-Terrestrial Data Center, NOAA, Boulder, CO, August 1980, 116 pp, $2.50.

UAG-77 "Synoptic Solar Magnetic Field Maps for the Interval Including Carrington Rotations 1601-1680, May 5, 1973 - April 26, 1979," by J. Harvey, B. Gillespie, P. Miedaner and C. Slaughter, Kitt Peak National Observatory, Tucson, AZ, August 1980, 66 pp, $2.50.

UAG-78 "The Equatorial Latitude of Auroral Activity During 1972-1977," by N.R. Sheeley, Jr. and R.A. Howard, E. O. Hulbert Center for Space Research, U.S. Naval Research Laboratory, Washington, DC and B.S. Dandekar, Air Force Geophysics Laboratory, Hanscom AFB, MA, October 1980, 61 pp, $3.00.

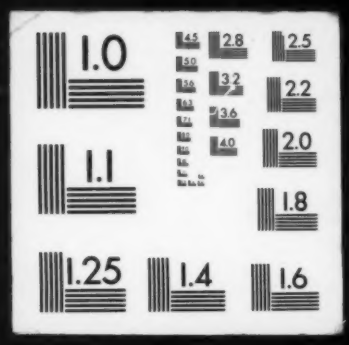
UAG-79 "Solar Observations During Skylab, April 1973 - February 1974, I. Coronal X-Ray Structure, II. Solar Flare Activity," by J.M. Hanson, University of Michigan, Ann Arbor, MI; and E.C. Roelof and R.E. Gold, The Johns Hopkins University, Laurel, MD, December 1980, 43 pp, $2.50.

UAG-80 "Experimental Comprehensive Solar Flare Indices for 'Major' and Certain Lesser Flares, 1975-1979," compiled by Helen W. Dodson and E. Ruth Hedeman, The Johns Hopkins University, Laurel, MD, July 1981, 33 pp, $2.00.

UAG-81 "Evolutionary Charts of Solar Activity (Calcium Plages) as Functions of Heliographic Longitude and Time, 1964-1979," by E. Ruth Hedeman, Helen W. Dodson and Edmond C. Roelof, The Johns Hopkins University, Laurel, MD 20707, August 1981, 103 pp, $4.00.

UAG-82 "International Reference Ionosphere - IRI 79," edited by J. Virginia Lincoln and Raymond O. Conkright, National Geophysical and Solar-Terrestrial Data Center, NOAA, Boulder, CO, November 1981, 243 pp, $4.50.

☆U.S. GOVERNMENT PRINTING OFFICE:1982—378-013 / 8


1.0
1.1
1.25
1.4
1.6
2.8
3.2
3.6
4.0
2.5
2.2
2.0
1.8